Smithsonian

February 1994

Frank Lloyd Wright's Fallingwater (p. 54)

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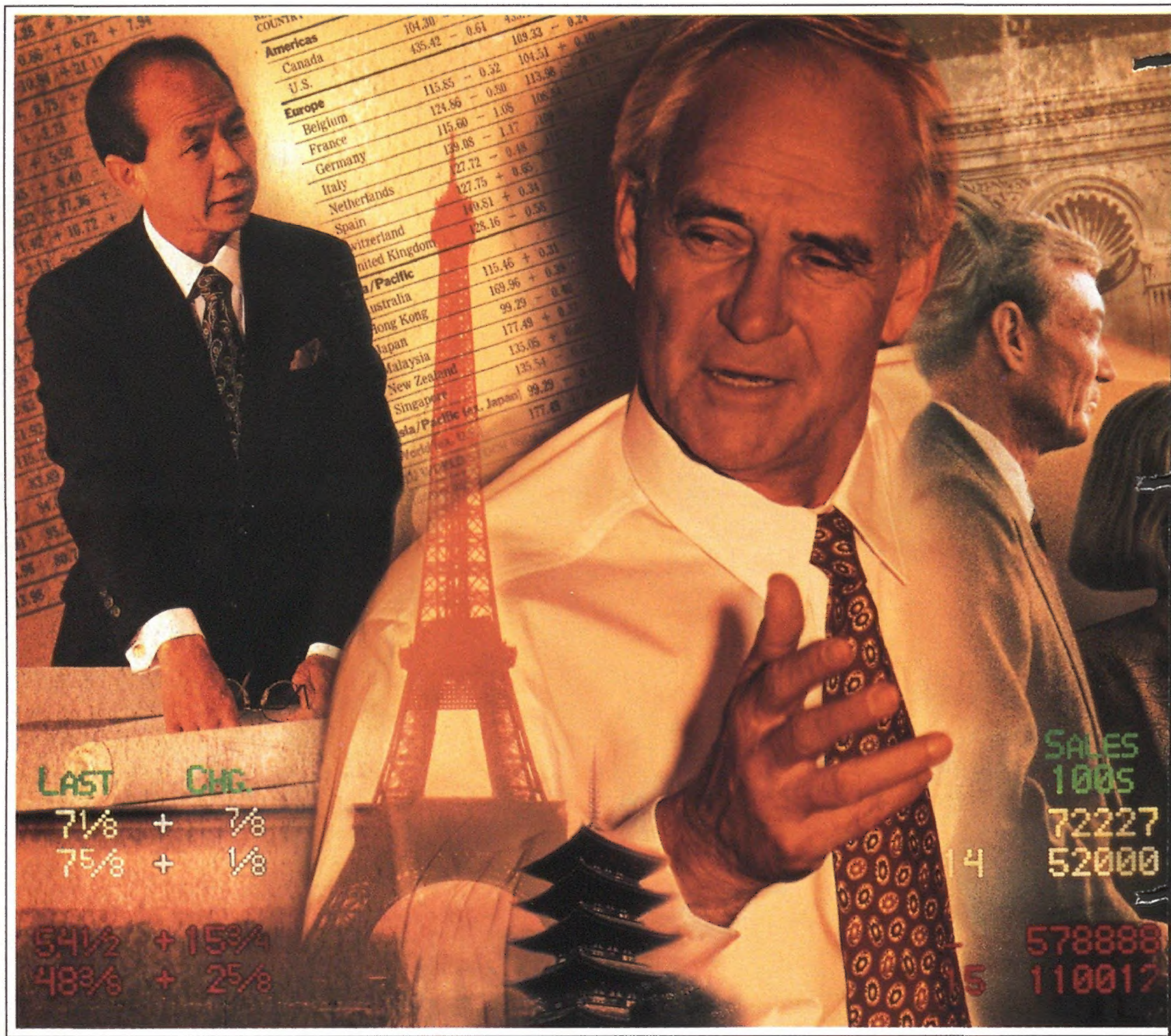

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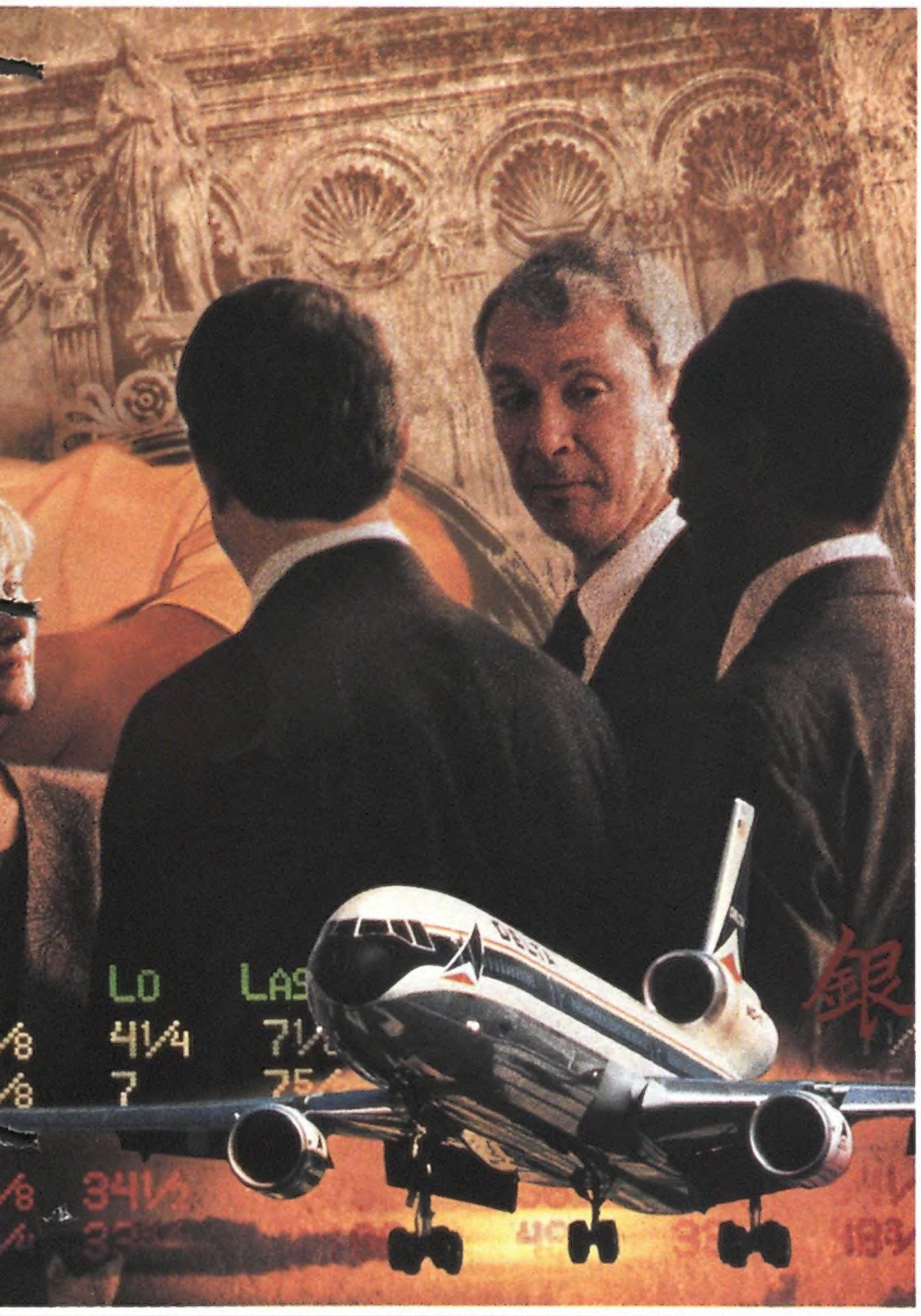

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February 1994

Smithsonian

Volume 24, Number 11

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Photograph by Thomas A. Heinz

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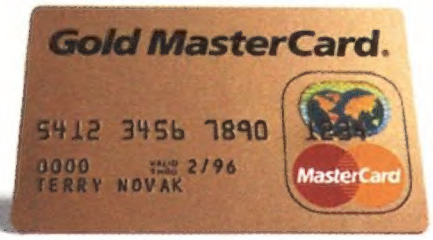

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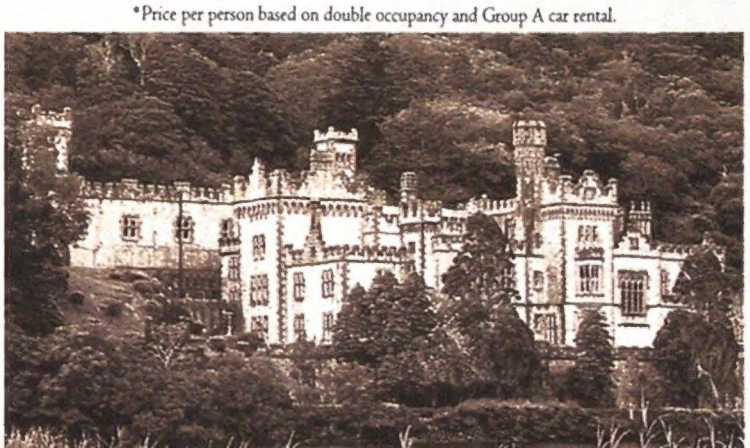

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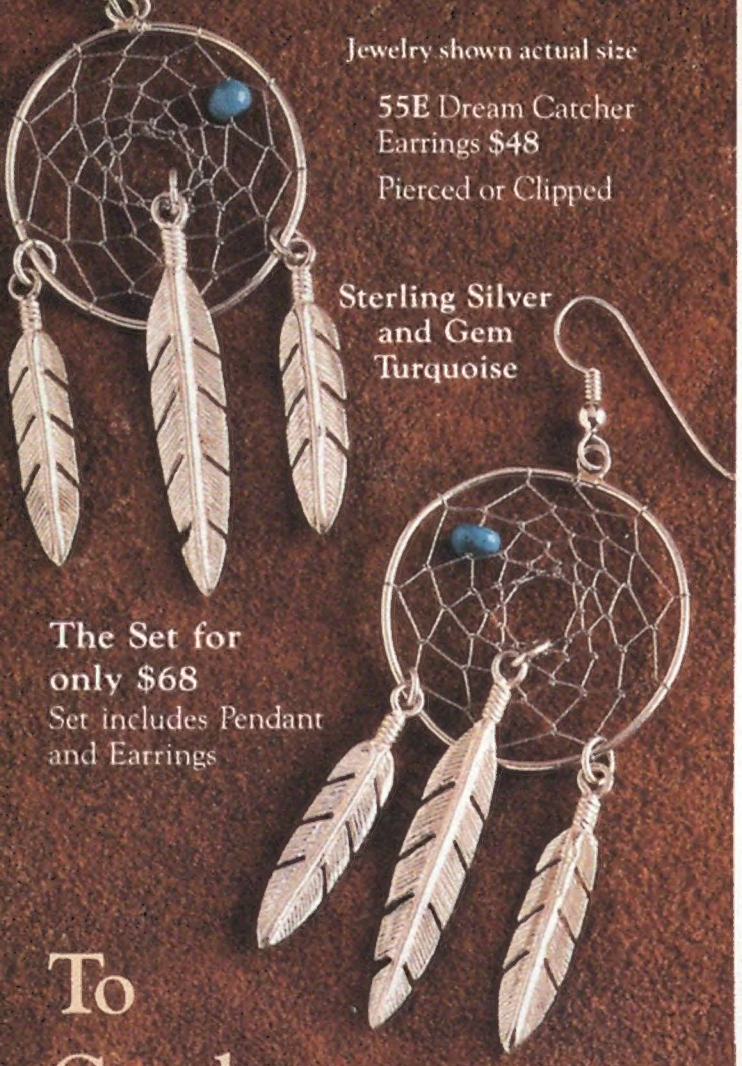

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Secretary Adams' comments

Smithsonian horizons

Seeing many perspectives of history turns our forebears into real people and sheds light on our diverse past

Disney may be coming to the Washington metropolitan area. Plans have been announced for a new theme park, "Disney's America," to be developed not far from the Civil War battlefield at Manassas, Virginia. With a well-deserved reputation for creative flair and professionalism in entertainment, including an almost overwhelming appeal for children of all ages, this would be a welcome addition to the list of attractions that bring enormous numbers of visitors to our national capital. On the model of the Disney Company's highly regarded Epcot Center in Orlando, they plan to offer exciting reenactments of critical times and places in American history.

Only a little is yet known of the plans for the new park, which are probably still at an early stage of preparation. We at the Smithsonian wish Disney well, and will certainly cooperate and lend assistance where we can. It is depressingly clear that we Americans are largely ignorant of our history, and with the persistent crisis in our schools, we are becoming more so. Those of us in the history business–as the Smithsonian surely is, with its National Museum of American History–need all the help we can get.

I've occasionally been asked whether the Smithsonian shouldn't be worried about the "competition." No, quite the opposite, and for two different reasons. The first, and simpler, one invokes the model of automobile dealerships that frequently congregate along the same street. They would hardly do so if it were bad for business. The fact is, business is better for everyone if it becomes known that such-and-such a street is the place to go in order to see the widest possible variety of makes and models. It isn't very likely that visitors would come to Washington *only* to see Disney's America, but it is quite likely that some family decisions to come would be tipped favorably in the end by the additional presence of a Disney attraction. Whatever the case, we'll continue to welcome everybody to the National Mall.

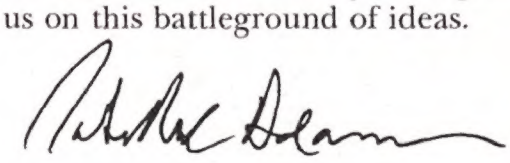
But second and perhaps more serious, the potential arrival of Disney properly turns our attention to what the Smithsonian itself is, and to what needs doing that we can do well. Our vast collections, to begin with, can convey a sense of direct contact with the past–of the palpable presence of the past as a *human* artifact. And vast collections do still more: they create the opportunity to move beyond the single, "iconic" image to an understanding that there have always been diverse needs, tastes and aspirations. They permit the character of change to be sensitively explored, and they lead to the discovery that change is sometimes slow and cumulative, and sometimes affects function but not form (or vice versa), while at other times change can be abrupt and pregnant with conflict.

Events crowd in on our lives today, from all over the world. Mostly they come in the form of 5- to 15-second sound-bites, devoid of analysis. Their immediacy overshadows inquiry into the larger implications of events and concern for the forces unfolding through time that make them happen. What constitutes significant news gets subtly reshaped in this process–toward the meaningless, specific details of violence, and away from the underlying, unifying complexities of these random acts, in order to get on with the next sound-bite. We can all nominate our favorite villains for the abyss into which the consciousness of American history has fallen–television, school textbooks, multiple-choice tests, you name it. But the real trends are more diffuse and harder to overcome. A sense of time working its way gets lost beneath the increasing immediacy and boundless entanglements of modern life.

This is the proper terrain for great museums to occupy: not insisting on one perspective but offering many. Not smoothing over ignorance and ambiguity but displaying the craft of analyzing evidence as part of their responsibility, and making plain where that craft leaves off and hunch or intuition must begin. Making our forebears real people by making their constraints and choices intelligible. Acknowledging that fact and myth often interpenetrate each other in strange, hidden ways, and that myths often acquire the force of facts. Persuading visitors to join in the endless quest to get past the screen of recorded action and into the inner world of belief, motive and perception where history really begins.

There is plenty of room for everybody in this work. The search for Truth may be endless, but we can all collaborate in making cumulative progress in its general direction. We need to recognize, to be sure, that the direction never stays put for very long. Consensus is fragile and not indefinitely helpful. Sometimes, instead, we need the slashing, revisionist reappraisal that threatens to undermine a whole, carefully constructed edifice of fact and opinion that was previously taken for granted. Great museums invoke the clash of ideas that made the past and will make our future as well.

Whether Disney's America intends to be merely instructive fun for the family or something more, we hope it will recognize that it cannot entirely avoid joining us on this battleground of ideas.



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Letters to the Editor

Richard Wetherill

Dear Sir: At the center of Willa Cather's triptych *The Professor's House,* one finds in cowboy-scholar Tom Outland an idealized portrait of the very Richard Wetherill whom David Roberts so engagingly describes in your December article.

Cather's 1925 novel contrasted the exhilaration of exploration and discovery with the life of the mind on campus–rather like the tension between Wetherill's headlong archaeology and the more punctilious academicians who subsequently visited Mesa Verde and criticized his methods.

The Professor's House draws directly upon Wetherill's experience and allows one an intuitive appreciation for his character and career.

John Swinton
State College, Pennsylvania

Dear Sir: The trouble with Richard Wetherill was that he never published. Professionals of the time treated Wetherill no differently than they did others, such as Edgar L. Hewett, the father of the Antiquities Act, who did not publish.

Lloyd M. Pierson
Moab, Utah

The Louvre

Dear Sir: *Venus de Milo* was found not by French archaeologists but accidentally by a poor peasant farmer named Georgos–when his land fell into the ancient catacomb near the Roman amphitheater on Melos, a Greek island in the Aegean. A French consular agent there named Brest, one of whose duties was to purchase any antiquities of value, wasn't sure of the esthetic value of this now fa-

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mous statue. His uncertainty almost lost it for France. It was said that when found, the statue possessed a hand, now lost, holding an apple; on the base was the name of sculptor Alexandros of Antioch, not Praxiteles as later claimed.
Henry Maslowski
Yonkers, New York

Berea College

Dear Sir: In the 1920s as a young lad in Western Springs, Illinois, I was sent every month with my little red wagon to pick up three portable sewing machines. I took them to the Baptist church where my mother, Mrs. Edith Rhoads, was president of the Dorcas Society. There the church women sewed clothes and quilts for the school in Berea, Kentucky.
Howard L. Rhoads
Burton, South Carolina

Dear Sir: My mother, Leslie, and father, Alfred, met at Berea around the turn of the century, and my growing up was filled with stories about their years there.

Having taught himself shorthand, Dad worked as secretary to Berea's president to satisfy tuition, room and board. One not-so-routine task was the annual registering and storing of the weapons brought to campus each fall. Many students were used to carrying, and occasionally using, guns and knives. Dad would stand at an open closet and try to talk them out of their weapons, giving them in return only a piece of paper, signed by President Frost, that listed the arms.

In the early 1950s Dad returned to the campus to receive an honorary degree. We all attended the ceremony, and I'm sure this was the proudest moment of his life.
David H. Meese
Chadds Ford, Pennsylvania

Ventriloquism

Dear Sir: Alexandre Vattemare did more for the masses than popularize ventriloquism. He stimulated the formation of the first free municipal library in the United States, the Boston Public Library, founded in 1852. His fervor for the international exchange of books caused the intellectual and city leaders of Boston in the 1840s to consider the merging of private library associations into a single public lending library.

Vattemare's run-in with the law for impersonating a fish may predate his encounter with a law officer in Scotland. In

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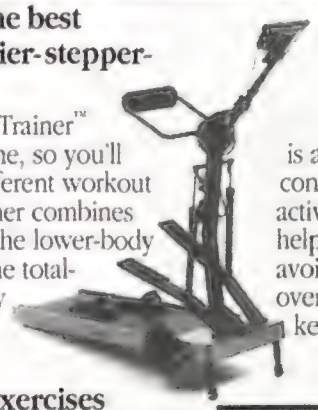

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1824 he entertained the poet–and also the sheriff of Selkirkshire–Sir Walter Scott, who wrote a poem in appreciation of Vattemare's talent. In part, it reads: "I think you're a troop–an assemblage–a mob, / And that I, as the sheriff, should take up the job; / And instead of rehearsing your wonders in verse, / Must read you the Riot Act, and bid you disperse."
Michelle Lamarre Jenny
Boston

Dear Sir: A New York Central brakeman on trains between Buffalo and Niagara Falls, known as "Popeye" due to his ability to screw up his face in the manner of that comic strip star, was a bit of a "vent."

On a Sunday during World War II, as the train pulled into the station, people heard what sounded like the anguished "Yipe!" of a small dog. A deadheading engineman raced past Popeye toward the locomotive, signaling to stop the train at once. "You've hit a dog! Come on, let's find it!" said he to the crowd.

The engineeer countered: "Yeah, my brakie does that very well, doesn't he?"
Wm. C. Kessel
Hamburg, New York

Dear Sir: I regret that Mr. Ross is not old enough to have seen the great Señor Wences, a vaudevillian who had the most intriguing puppet of all–a hand puppet.

Late in his career Wences added a second character, an ugly man's head that faced the audience from a box on a table. While the hand puppet spoke in a squeaky child's voice, the head-in-the-box had a low growl. Their three-way conversation was hilarious.
Henry Morgan
New York City

Dear Sir: When I was young, dummies and ventriloquism fascinated me. I couldn't afford a dummy so had to be satisfied with a cardboard Charlie McCarthy. After endless hours of practice, I learned how to not move my lips. Imagine my disappointment when I first saw Edgar Bergen on TV. He moved his!
Janet Flower
Portland, Oregon

Dear Sir: My father, John W. Cooper, [above] was a Brooklyn-born, African-American pioneer ventriloquist. He was introduced to his lifelong profession while an orphaned exercise boy, working at the old Sheepshead Bay racetrack. His most famous pupil was Shari Lewis, daughter of his magician friend Abraham Hur-

witz, whose stage name was "Peter Pan."

My father's figure, "Sam," was also made by Theodore Mack in Chicago. Father passed away at 92 in 1966; now Sam is on display at the permanent gallery of the Brooklyn Historical Society.
Joan Maynard
Brooklyn

Black-eyed peas

Dear Sir: Your article helped clear up a question that my ninth-grade students and I had when reading Carson McCullers' *Member of the Wedding*. Frankie, the central character, says her favorite food is hopping John, but the combination of rice and peas didn't sound especially tasty. However, black-eyed peas, rather than green peas, cooked with ham gravy sounded so good that some of my students asked for the recipes in your article, which we read aloud together, enjoying all the beliefs connected with the dish, as well as the fact that so many different regions claim it as their own.
Marlene Mitchel
Chicago

Dear Sir: Hopping John is a recipe and a custom I've never heard of in my 74 years. I asked my wife, who does crosswords, if she'd ever seen it. Nope. An hour or so later, doing a Double-Crostic, she said, "Look at this definition: 'Stew made of cowpeas, rice, and bacon or salt pork, often served on New Year's Day.'" The odds on this happening?
Harry N. Press
Palo Alto, California

Dear Sir: My parents, with whom I shared your article, were puzzled by your quoting a Japanese chant as "*Oni wa soto, fuka wa uchi*" ("Out with demons! In with good luck!"). *Fuka* means "shark," while "good luck" is *fuku*. We all had a chuckle over that one.
Carolyn M. Watanabe
Corona, California
And rightly so. Ed.

Dear Sir: In Japan we do not scatter beans for New Year's Eve, but we do scatter roast soybeans on the evening of February 4 in honor of the coming of spring. Then we eat the same number of beans as our age and sweep up the rest before we go to bed.

On New Year's Day we eat black beans. Japanese people spend a quiet New Year's Eve, either going to a shrine or to a temple to pray at midnight.
Yasuko Takaiwa
Wantagh, New York

Marbled murrelet

Dear Sir: Let me add two pertinent facts relating to the endangerment of this species. First, in its northernmost range in Alaska it nests on the ground in treeless or scrub tree regions, such as the Barren Islands. Second, the high mortality in some areas can be attributed to gill net fishing. In 1980 the Fish and Wildlife Service estimated that in Barkley Sound in British Columbia almost 8 percent of the breeding population was killed in gill nets. To attribute the decline of this interesting little bird solely to loss of old-growth habitat is erroneous.
Keith J. Walker
Hoonah, Alaska

Dear Sir: While Steve Singer deserves credit for his recent work, and for his part in the discovery, it was not he who first tentatively identified the bird. On February 1, 1973, a marbled murrelet was turned in to Big Basin Redwoods State Park Headquarters. Rangers Don Patton, Ray Patton, Steve Singer and I successfully identified it. When, on August 7, 1974, Hoyt Foster made his historic climb, recovering a murrelet chick, Don Patton and Steve Singer agreed with me it was indeed that elusive bird. The identification was the result of our fortunate 1973 identification.
Denzil Verardo, Assistant Director
California Department of Parks
and Recreation
Sacramento

To treat symptomatic benign enlarged prostate:

Only one medicine can shrink the prostate.

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Until recently, there wasn't a medicine that could help the condition known as symptomatic benign prostate enlargement or BPH. But now there is PROSCAR, the first oral prescription medicine that can shrink an enlarged prostate.

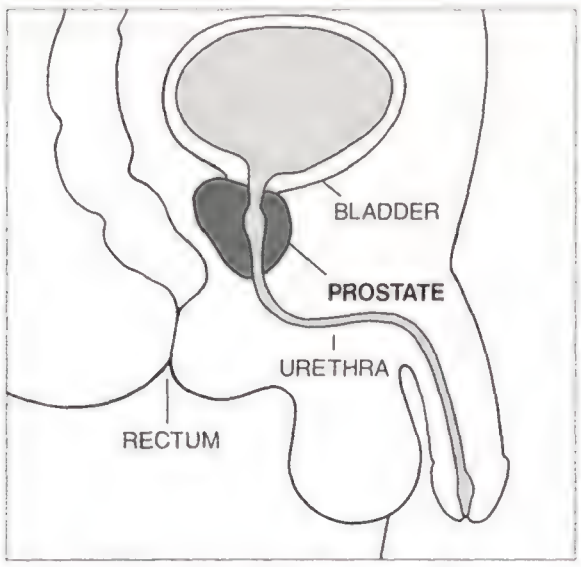
However, it is important to know the following: PROSCAR doesn't work for everyone. Even though your prostate may shrink, you may not see an improvement in urinary flow or symptoms. And you may need to take PROSCAR for 6 months or more to see whether it helps you.

How PROSCAR can shrink an enlarged prostate.

As a man ages, a key hormone can help cause the prostate to grow. PROSCAR actually blocks the production of this hormone, so it helps shrink the prostate to a smaller size in many men. As a result, some men treated with PROSCAR experience an increased urinary flow and an improvement in urinary symptoms.

Why you should see your doctor soon.

Your doctor has several options for the treatment of symptomatic BPH: watchful waiting (monitoring the condition with regular checkups), medication, or surgery. It's important to see your doctor because the problem doesn't usually get better by itself. In many cases, the prostate continues to enlarge and the symptoms may get worse. So if your urinary symptoms are bothering you, have your family doctor or a urologist assess your condition and ask if PROSCAR is an appropriate treatment for you.



The prostate surrounds part of the urethra, the tube that carries urine from the bladder. As the prostate enlarges, it can squeeze the urethra and cause urinary problems.

It is also important to have regular checkups. *While benign prostate enlargement is not cancer and does not lead to cancer, the two conditions can exist at the same time.*

Remember, only a doctor can evaluate your symptoms and their possible causes. So, if your urinary symptoms are bothering you, don't wait any longer. You may find that your enlarged prostate can be made into a smaller problem.

For more information about prostate enlargement and PROSCAR, call 1-800-635-4452 today.

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(FINASTERIDE)

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Please see patient information on the following page.

J3PO35(701)-PSA761

PATIENT INFORMATION ABOUT PROSCAR® (Prahs-car)
Generic name: finasteride (fin-AS-tur-eyed)

PROSCAR is for the treatment of symptomatic benign prostatic hyperplasia and for use by men only.

Your doctor may prescribe PROSCAR if you have a medical condition called benign prostatic hyperplasia or BPH. This occurs only in men.

Please read this information, as well as the leaflet which accompanies your medication, before you start taking PROSCAR. Also, read the leaflet each time you renew your prescription, just in case anything has changed. Remember, this leaflet does not take the place of careful discussions with your doctor. You and your doctor should discuss PROSCAR when you start taking your medication and at regular checkups.

What is BPH?

BPH is an enlargement of the prostate gland. After age 50, most men develop enlarged prostates. The prostate is located below the bladder. As the prostate enlarges, it may slowly restrict the flow of urine. This can lead to symptoms such as:

- a weak or interrupted urinary stream
- a feeling that you cannot empty your bladder completely
- a feeling of delay or hesitation when you start to urinate
- a need to urinate often, especially at night
- a feeling that you must urinate right away.

Treatment options for BPH

There are three main treatment options for BPH:

- **Program of monitoring or "Watchful Waiting".** If a man has an enlarged prostate gland and no symptoms or if his symptoms do not bother him, he and his doctor may decide on a program of monitoring which would include regular checkups, instead of medication or surgery.
- **Medication.** Your doctor may prescribe PROSCAR for BPH. See **"What PROSCAR does"** below.
- **Surgery.** Some patients may need surgery. Your doctor can describe several different surgical procedures for BPH. Which procedure is best depends on your symptoms and medical condition.

What PROSCAR does

PROSCAR lowers levels of a key hormone called DHT (dihydrotestosterone), which is a major cause of prostate growth. Lowering DHT leads to shrinkage of the enlarged prostate gland in most men. This can lead to gradual improvement in urine flow and symptoms over the next several months. However, since each case of BPH is different, you should know that:

- Even though the prostate shrinks, you may NOT see an improvement in urine flow or symptoms.
- You may need to take PROSCAR for six (6) months or more to see whether it helps you.
- Even though you take PROSCAR and it may help you, it is not known whether PROSCAR reduces the need for surgery.

What you need to know while taking PROSCAR

- **You must see your doctor regularly.** While taking PROSCAR, you must have regular checkups. Follow your doctor's advice about when to have these checkups.
- **About side effects.** Like all prescription drugs, PROSCAR may cause side effects. Side effects due to PROSCAR may include impotence (or inability to have an erection) and less desire for sex. Each of these side effects occurred in less than 4% of patients in clinical studies. In some cases side effects went away while the patient continued to take PROSCAR.

Some men taking PROSCAR® (Finasteride) may have a decrease in the amount of semen released during sex. This decrease does not appear to interfere with normal sexual function.

You should discuss side effects with your doctor before taking PROSCAR and anytime you think you are having a side effect.

- **Checking for prostate cancer.** Your doctor has prescribed PROSCAR for symptomatic BPH and not for cancer—but a man can have BPH and prostate cancer at the same time. Doctors usually recommend that men be checked for prostate cancer once a year when they turn 50 (or 40 if a family member has had prostate cancer). These checks should continue while you take PROSCAR. PROSCAR is not a treatment for prostate cancer.
- **About prostate specific antigen (PSA).** Your doctor may have done a blood test called PSA. PROSCAR can alter PSA values. For more information, talk to your doctor.
- **A warning about PROSCAR and pregnancy.**

PROSCAR is for use by MEN only.

PROSCAR is generally well tolerated in men. However, women who are pregnant, or women who could become pregnant, should avoid the active ingredient in PROSCAR.

If the active ingredient is absorbed by a woman who is pregnant with a male baby, it may cause the male baby to be born with abnormalities of the sex organs. Therefore, any woman who is pregnant or who could become pregnant must not come into direct contact with the active ingredient in PROSCAR.

Two of the ways in which a woman might absorb the active ingredient in PROSCAR are:

Sexual contact. Your semen may contain a small amount of the active ingredient of the drug. If your partner is pregnant, or if you and your partner decide to have a baby, you must stop taking PROSCAR and talk to your doctor. If your partner could become pregnant, proper use of a condom can reduce the risk of exposing her to your semen (discuss this further with your doctor).

Handling broken tablets. Women who are pregnant or who could become pregnant must not handle broken tablets of PROSCAR.

PROSCAR tablets are coated to prevent contact with the active ingredient during normal handling. If this coating is broken, the tablets should not be handled by women who are pregnant or who could become pregnant.

If a woman who is pregnant comes into contact with the active ingredient in PROSCAR, a doctor should be consulted. Remember, these warnings apply only if the woman exposed to PROSCAR is pregnant or could become pregnant.

How to take PROSCAR

Follow your doctor's advice about how to take PROSCAR. You must take it every day. You may take it with or between meals. To avoid forgetting to take PROSCAR, it may be helpful to take it the same time every day.

Do not share PROSCAR with anyone else; it was prescribed only for you.

Keep PROSCAR and all medicines out of the reach of children.

FOR MORE INFORMATION ABOUT PROSCAR AND BPH, TALK WITH YOUR DOCTOR. IN ADDITION, TALK TO YOUR PHARMACIST OR OTHER HEALTH CARE PROVIDER.

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Phenomena, comment and notes

A confirmed skeptic has to admit that environmentalists can make good use of a global computer network–if, if, if

Promises that the next technological advance will make our lives wonderful make me nervous. The more the hoopla, the more curmudgeonly I become. During World War II, for example, we read that when it was over, all of us would fly. Little cars with helicopter rotors on top, known as autogyros, would be able to take off from our driveways and carry us to work. Somehow, it never happened. Not too many years later the old Atomic Energy Commission assured us that nuclear power plants would make electricity so cheap that no one would bother to meter it. Well, not yet.

For years I resisted the breathless news stories and the wild enthusiam of friends about how personal computers were going to change our lives. I hurt my back leaning over for hours while someone tried to show me how the computer could make what seemed to me an easy task to begin with, laughably simple. The problem was that invariably he (in those days it was more often a he) could not make it work. If I would hang on for just another couple of minutes, he was sure he could figure it out.

Then came the day at work when we were issued computers: the magazine was leapfrogging into the modern era. Instead of simply typing, we would be using word processors. My feeble retort was that what I needed were the words: once I had them, I could process them myself. My first efforts were equally feeble. It took me months to learn that you had to dispose of whatever was on the screen before you could do something else. The

screen would tell me to "Abort, store or open a window." I had no clue as to what that meant, so would simply shut down the computer and turn back to the typewriter.

(Today, of course, we have computer-literate people on the staff. Now whenever I am in trouble with my infernal machine, I just walk into another office, try to look as pitiful as possible and quaver: "Alison!")

Even when I began to catch on, using a computer struck me as being a lot like camping. The machine appeared to be designed to make simple things complicated, just as camping can make a real project out of something as simple as making coffee. Things I had done on a typewriter without thinking now had to be broken down into a series of commands. One letter out of place, and the computer would pretend it had no idea what was wanted.

It is time to confess, however, that the machine and I have worked out a modus vivendi. It does make writing faster and easier, especially tightly restricted forms such as captions for pictures. On longer stories, cleaning up ugly sentences or moving blocks of text around is a breeze.

Having admitted that much, I must also confess to a touch of fever induced by the current computer hoopla. It *is* becoming true that a box of transistors connected to a telephone line can provide instant access to information anywhere in the world. It works, even for those of us who are technologically challenged (let's not talk about VCRs) and too old to even daydream about becoming cyberpunks. I have been stumbling around inside an electronic network used by the environmental movement in this country and around the world. Called EcoNet, it is the place to go to find out what's happening.

Connecting to EcoNet is like being dropped onto the trading floor of the New York Stock Exchange, except the only sound is your own keys clicking. Information is coming at you from all directions in great, gushing torrents. First the system tells you if you have any new mail (we'll deal with that in a moment). Then it informs you that there are new items that you have not yet read in the "conferences," or electronic bulletin boards, that you have told the system you want to know about. A computer in San Francisco keeps track of what you want to see and what you have read and what is new since the last time you called.

This part is easy. To get to the conferences, you type the letter "c". Then you tell the system you want to "visit" those conferences you have previously selected by typing the letter "v". The rest is all done for you. When you're finished, type the letter "q" for quit and then the word "bye" and you're outta there.

It is hard to leave, though. There are hundreds of conferences. And so you surf, sampling here and there, making hurried notes about those you want to come back to.

Some conferences are real bulletin boards. One person posts an idea, a proposal, a thought, and then others respond. Other conferences are calendars of events, newsletters, legislative alerts, funding sources, press releases and breaking news stories. Still others are what computer people call data bases: full texts of government documents, newsletters and alternative publications, directories of grant-making foundations, lists of fax numbers for government and media and the like.

EcoNet is one of four networks (the others are PeaceNet, ConflictNet and LaborNet) operated by the Institute for

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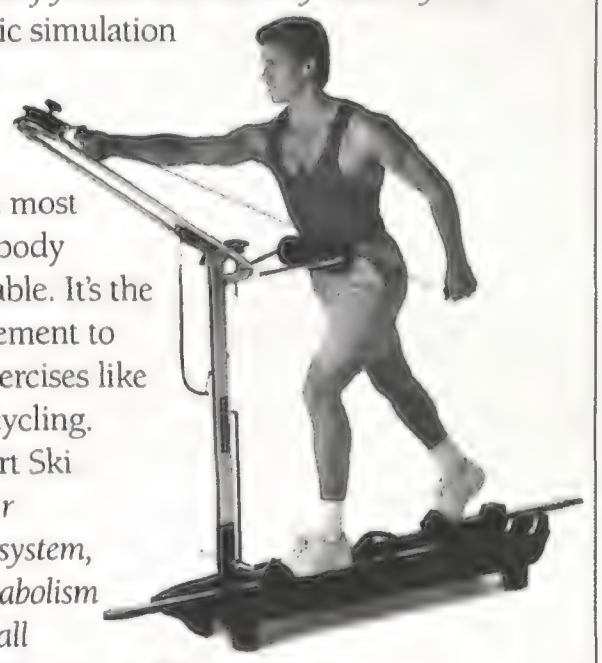

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Global Communications in San Francisco, a division of the Tides Foundation. Its mission is to provide computer networking tools to facilitate international communication. It has set up or given technical support to similar networks around the world, known collectively as the Association for Progressive Communications. By connecting to EcoNet, you also have access to Pegasus in Australia, AlterNex in Brazil, the Web in Canada, EcuaNex in Ecuador, GreenNet in England, ComLink in Germany, GlasNet in Russia and a half-dozen others. New ones are taking shape in Kenya, Bolivia and elsewhere.

With its partner networks, EcoNet represents more than 18,000 organizations and individuals. It is also a gateway to the rest of the world. You can send faxes, and send and receive e-mail and telexes. EcoNet also provides gateways to other networks, both the commercial services, such as MCI Mail and CompuServe, and also the nonprofits, such as Bitnet, FidoNet and that 800-pound gorilla, Internet, which now connects something like three million people.

One day in December I went surfing, looking for random items as a way of explaining the range of EcoNet. First I found the January calendar of events for the Washington (D.C.) Area Bicyclists Association. Some of the 10 percent of our staff that bikes to work might like to see it. Then there was a long report from the International Union for the Conservation of Nature on the status of all the remaining tigers in the world, the work of sometime SMITHSONIAN writer Peter Jackson, chairman of the cat specialist group at the IUCN. The boss might like to see it.

Next was a slew of conferences run by the Global Rivers Environmental Education Network at the School of Natural Resources at the University of Michigan. Finally, a long piece from a publication called *Lies Of Our Times* challenged Turkish claims to brotherhood with the Muslims of Bosnia: it seemed a natural for a friend of mine whose husband is about to be posted to Turkey for the State Department.

So here I sit with the world at my fingertips. I can find the things I want and bring them up on the screen. The system operators make it extraordinarily easy. Instructions are simple. If I still get lost, I just type "?" and the screen fills with step-by-step coaching, then offers more. There is a test conference for practice. Five dollars buys a disk so I can practice while not connected. There's even a training video. (Think how it must drive computer experts absolutely nuts to design a system for idiots: "Yes, that's right. Now put your left foot in front of the right. Good. Now put your right foot. . .") And still I don't get it. I just can't do it.

It's the software, the sets of instructions to the computer called programs, that makes me tell the cat that if he meows once more, he is going right out that eighth-floor window. Once you have a computer and the device (called a modem) to hook it into the telephone lines, you need a special program (another set of instructions to the computer) to actually send or receive information. My beautiful new machine came with such a program–that doesn't work.

So I have installed two other communication programs. Even the older of the two could still take advantage of my new computer's power and increase the speed at which I can send and receive mail and messages or transfer longer items into my computer. The speed is known as the "baud rate" (note the "u") and, I believe, is roughly translatable as bits per second. For years I had bumbled along at a rate of 1200 but now had a machine that could do 9600. Being modest, I started off at 2400. This is tricky, because to get on EcoNet, you call the local number for the SprintNet data network. You use one telephone number for a baud rate of 1200, another for 2400, and so on.

The first time I tried, it worked fine. The second time, everything froze. None of the keys worked. Shut it off. Kick the cat. Watch television. Whatever. Calmer, I dropped the baud rate back to 1200, switched the telephone number–and it began working again. So much for my muscle machine.

The newer program was going to solve all my troubles. I went through the instructions, putting my machine on settings I did not understand. Nobody in my school ever told me that when I set up the "initial string" for the modem that it made sense to set it at: ATE1 S7=60 S11=55 V1 X1 S0=0!

The first time out, this one worked like a Rolls-Royce. The second time out, it froze. By now a computer whiz (call me CyberGeek), I managed to discover that the program had the computer trying to "talk" on the telephone over a connection called Com1, but the phone line was plugged into Com2. There's no jack for Com1 that I can find, so instead I tried telling the computer to use Com2. Piece of cake. I called that table of settings back to the screen and punched in "21" to select Com2. Then, being no dummy, I punched "24" to make that change permanent, as per instructions. A message began flashing on the screen: "Saving changes to disk." I waited. It kept flashing. I nuked some lunch, read the paper, came back. Still flashing. All the keys were dead. Shut it off.

And that's not the bad news. The real problem is that no matter how hard I try, I cannot move anything from EcoNet into my computer, what we hackers call "downloading." I can get it on the screen, and I can make my printer print out what is on the screen. But for a long article, that means working a screenful at a time. I print out what is on the screen, then move down the text until the next section fills the screen and print again. Not only does this take forever, but it means that everything on the screen has been printed, including the long lines of computer code at the top and bottom of each screen. Messy. Slow. It also means tying up EcoNet.

That day in December I thought I had it. I had carefully set up a file called C:\Econet\Incoming (don't ask). To capture those four stories I wanted, I went back to the four conferences in which they had appeared and followed instructions.

It seemed to work. "Transfer completed," said the screen. Now! Hang up on EcoNet. My computer and I were alone at last. All I had to do was see if "Incoming" now appeared in my own directories (more like tables of contents, really) and if so, call it up on the screen. I asked for the directory . . . and there it was, all 130,000 bits or bytes or whatever the hell they are. The four sample items were alive and well. Jauntily I called up "Incoming." Nothing. Only the line saying "This is a test" I had put in to open the "Incoming" file. Teeth clenched, I asked for the list again. Now it told me that "Incoming" had only 76 bytes. The good news was that a newly created file called "Incoming.bak" (the machine had made a copy of the original to be stored as a backup, spelled "bak") still had those wonderful 130,000 bytes. I called up "Incoming.bak": "This is a test" . . . and . . . nothing.

EcoNet is a wonderful thing. So are VCRs. So are brain surgery and high-energy physics. So what's on television?

John P. Wiley jr.

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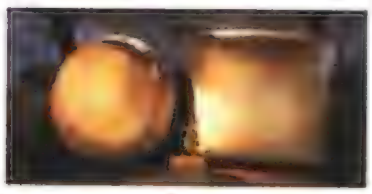

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Smithsonian highlights

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Begin your visit at the Smithsonian Information Center's Associates' Reception Desk–open from 9 A.M. to 4 P.M. daily–in the "Castle." The Court dining room, located in the National Museum of Natural History, offers buffet service daily from 11 A.M. to 3 P.M. The Castle's Commons dining room will be closed through April.

Most Smithsonian museums are open from 10 A.M. to 5:30 P.M. daily, except December 25. Hours at the National Zoo are 9 A.M. to 4:30 P.M. daily for buildings, and 8 A.M. to 6 P.M. for grounds.

National Black History Month
During February the Smithsonian will celebrate National Black History Month with a variety of programs. For 24-hour information recording, call (202) 357-4574 (English) or (202) 633-9126 (Spanish) starting January 24.

Musical Weekend

The 22d Smithsonian Musical Weekend will be held April 29-May 1. Highlights include a performance by the Dance Theatre of Harlem at the Kennedy Center; a concert by the Smithsonian Chamber Players; and tea and music at the Japanese Embassy. For details write: Musical Weekend, Box 11302, Washington, D.C. 20008-0502.

Special February exhibits, events

National Museum of Natural History
Chiefly Feasts: The Enduring Kwakiutl Potlatch (through March 6) Exhibition showcases the art and culture of one of the most unusual and important Northwest Coast Native American ceremonies. See *Highlights continued,* page 22.
O. Orkin Insect Zoo The newly renovated insect zoo features various insect habitats–mangrove, desert and walk-through rain forest.

National Zoological Park
Amazonia Permanent installation re-creates a microcosm of the world's largest rain forest and river habitat and explores this richly diverse ecosystem.

National Air and Space Museum
Monitoring Amazonia from Space (through March 30) How modern satellite technology is being used to monitor Amazonia's complex ecosystem.
Where Next, Columbus? Permanent exhibition looks ahead to the next 500 years of space exploration.

National Museum of American History
Edison After Forty (through September 6) Exhibit examines the later years of Edison's career and work done at his West Orange, New Jersey, laboratory.
Seeing is Believing: The Photography of the Civil Rights Movement (through September 11) Photographs taken on behalf of such organizations as the NAACP document the struggle for racial equality in the United States. Images bear witness to key events of the civil rights movement.

Ulysses butterfly from Imax's *Tropical Rainforest* at NASM; shown daily, 6 P.M.

National Postal Museum
The Smithsonian's newest museum, located next to Union Station on Capitol Hill, presents exhibitions tracking the history of the nation's mail service.
The Madden Family Letters (through July 30) Display traces five generations of an African-American family.

National Museum of African Art
Asen: Iron Altars from Ouidah, Republic of Benin (through April 24) Exhibition explores beliefs and symbols that spread from Africa to the New World and back.
Royal Benin Art in the Collection of the National Museum of African Art (runs indefinitely) Works from the 15th to the 19th century include royal commemorative heads, figures and plaques.

Freer Gallery of Art
America Meets Asia Newly renovated and reinstalled galleries feature Asian and 19th- and early 20th-century American art, including an important collection of works by James McNeill Whistler.
Luxury Arts of the Silk Route Empires (runs indefinitely) Adjoining galleries showcase objects from the Freer and Sackler collections tracing the cultural interchange along the Silk Route.

Arthur M. Sackler Gallery
Korean Arts of the Eighteenth Century: Splendor & Simplicity (February 20-May 15) Exhibition of masterworks explores the cultural vitality of a nation forging its modern identity (see page 99).
Contemporary Porcelain from Japan (through September 5) Innovative and varied porcelain vessels by 30 masters.

Hirshhorn Museum & Sculpture Garden
Gary Hill (February 17-May 8) Video installations look at the metaphysical implications of viewer's location in space.
The Collection Reviewed: Alexander Calder (through March 27) Mobiles and other sculptures by the popular artist.

National Museum of American Art
Earthly Constellation: Photographs by Linda Connor (through March 20) Images by

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The Arvin Gottlieb Collection: Paintings from the American Southwest (through March 20) Exhibition features most of the major painters who worked in New Mexico between 1900 and 1940.

Renwick Gallery
William Daley: Ceramic Works and Drawings (February 18-April 17) Works by one of the leading figures in the history of American craft.
KPMG Peat Marwick Collection of American Craft: A Gift to the Renwick Gallery (February 25-April 17) Contemporary crafts by such artists as Peter Voulkos, Lenore Tawney and Rudolf Staffel.

National Portrait Gallery
From Elizabeth I to Elizabeth II: Master Drawings from the National Portrait Gallery, London (February 25-April 24) Portraits of some of the most important and intriguing figures in Britain's history.
VanDerZee Photographer (1886-1983) (through February 13) Retrospective looks at the 80-year career of the distinguished Harlem photographer.

Anacostia Museum
Before Freedom Came: African-American Life in the Antebellum South (through March 1) SITES exhibition features personal stories about African-Americans who escaped slavery.

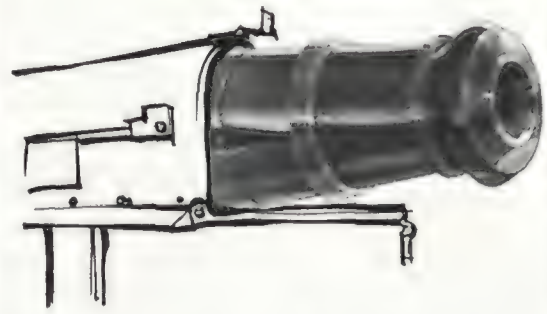
Arts and Industries Building Discovery Theater
Anansi and the Wisdom of the World (February 1-March 12: Tuesday-Friday 10 and 11:30 A.M.; Saturday, 11:30 A.M. and 1 P.M.) Live theater for young audiences presents African-American folktales.

Cooper-Hewitt Museum (New York)
Packaging the New: Design and the American Consumer, 1925-1975 (February 8-June 14) Role of the designer during America's golden age of industrial design.

Exhibition catalogs

Catalogs available currently include:
Chiefly Feasts: The Enduring Kwakiutl Potlatch ($60/$29.95 paper)
VanDerZee Photographer, 1886-1983 ($39.95)
Astonishment and Power: Kongo Minkisi/ The Art of Renée Stout ($34.95 paper)

To order, send check or money order to Smithsonian Museum Shops, 8308 Cinder Bed Road, Newington, Virginia 22122. Include 15 percent of purchase to cover postage, handling (minimum, $1.75).



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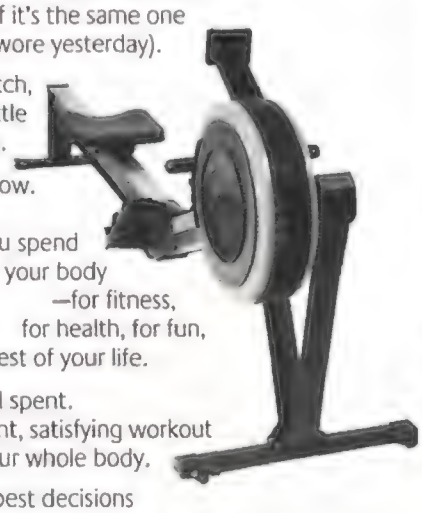

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Jazz Smithsonian Radio Smithsonian's new series features the Smithsonian Jazz Masterworks Orchestra performing music of the 1920s, '30s, '40s and '50s. Hosted by singer Lena Horne, programs this month spotlight jazz greats such as Duke Ellington, Lionel Hampton and Dizzy Gillespie. Check local public radio listings.

Smithsonian National Associates

In February, the National Associates Program, U.S. and International Events comes to Sacramento and Riverside/San Bernardino, California, and New York City. The Sacramento program (February 2-5) presents lectures on Latin artists and American railroads. In Riverside/San Bernardino (February 9-13), topics include America's multicultural society and jazz. The New York series (February 12-13, 26-27) celebrates Black History Month with concerts and lectures on African-American music.

Associates in these areas will receive invitational brochures; Contributing Members will receive complimentary tickets to a selected lecture. For information, contact: U.S. and International Events, 490 L'Enfant Plaza, S.W., Washington, D.C. 20560; (202) 287-3210.

Resident Associate Program

To become a Resident Associate, or for fee and ticket information, call (202) 357-3030. February events include:
Sally Kellerman Up Close: A Cabaret Evening (February 25; 7:30 P.M.) An evening of song.
Looking Ahead with Austin and Knight Kiplinger (February 28; 6:15 P.M.) Lecture celebrates 70 years of forecasting by the coeditors of the *Kiplinger Washington Letter.*

Smithsonian InstitutionTraveling Exhibition Service

SITES organizes and circulates exhibitions to cities throughout the United States and abroad. To sponsor a show in your community, write SITES, Smithsonian, Washington, D.C. 20560. Here are some February exhibits:
• Minneapolis, Minnesota (February 12-May 29) *Art as Activist: Revolutionary Posters from Central and Eastern Europe,* University of Minnesota.
• Tempe, Arizona (February 5-March 13) *Capturing the Spirit: Portraits of Contemporary Mexican Artists,* University Art Museum, University of Arizona.

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Highlights continued

The chiefly art of the potlatch

"When one's heart is glad, he gives away gifts. It was given to us by our Creator, to be our way of doing things, we who are Indians. The potlatch was given to us to be our way of expressing joy."

–Agnes Alfred, Kwakiutl, 1974

The ancient potlatch tradition of the Kwakiutl people of British Columbia, Canada, was nearly obliterated by the government's anti-potlatch law of 1884, enacted because the ceremony was seen as a threat to the Indians' assimilation into Western culture. But the practice, conducted for decades in secret, has remained a vital part of Kwakiutl culture.

Potlatches are elaborate feasts hosted by chiefs to mark such events as the naming of children and the transfer of rights. The status of the host is established by the display of artworks (masks, blankets), lavish gifts and food, dramatic dances and the divestiture of possessions.

This intriguing tradition is brought vividly to life in "Chiefly Feasts: the Enduring Kwakiutl Potlatch," on view at the National Museum of Natural History through March 6. Organized by the American Museum of Natural History in New York City, the exhibit features one of the world's finest Northwest Coast Native American collections, assembled for the museum in 1897-1902 by anthropologist Franz Boas and his field assistant George Hunt. "This show is a celebration of Kwakiutl culture," says curator Aldona Jonaitis. "Like the people themselves, the Kwakiutl potlatch endures."

Diane M. Bolz

Masters of illusion, Kwakiutl artists created clever transformation masks for the ceremony. Eagle head mask (above), collected by Hunt in 1899, opens to reveal a hook-nosed anthropomorphic visage (left).

Mask of Born-to-Be-Head-of-the-World was found in Hopetown in 1901. The outer mask (left) can be manipulated by the dancer to expose alternate aspect of the hero inside (right).

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By Donovan Webster

'The soldiers moved on. The war moved on. The bombs stayed'

Laurent Flauder gently carries a live artillery shell out of a forest near town of Verdun (above). Skins of the bombs (opposite) have corroded over 75 years, but shells can still kill by explosives or poison gases.

French démineurs are clearing millions of acres of the lethal debris of two world wars; in a good year, not that many are killed

Across the centuries, France has often been a battleground. On this particular morning, a Tuesday in late September, we're cleaning up after World War I. Six of us are walking through a dense forest just outside the town of Verdun, 160 miles east of Paris. Scattered across the uneven ground, in and among the still-extant bomb craters and trench lines, unexploded bombs are everywhere. A 170-millimeter shell (long as a man's leg; bigger around than his thigh) rests like a leaf-swaddled child at the edge of a crater. It is picked up and carried back to the truck by one of the *démineurs.*

A few steps away, at the edge of a trench, sits a stockpile of 75-millimeter shells, the most widely used bombs of the war. From today's perspective, they resemble nothing so much as a stack of corroded hairspray cans. One by one, the rusted, moss-blanketed bombs are lifted from their 75-year rest and transferred to the truck by the démineurs.

In a nearby foxhole are a dozen German grenades: they're the "racquet type," which means their baseball-size explosive charges are lashed to foot-long (and now rotted) throwing sticks of wood. They look like potato mashers. And that, in fact, is what the American soldiers nicknamed them. One by one, they are scooped up and carried to the truck.

All around me the démineurs ("de-miners"), as France's bomb-disposal experts are called, are clearing the forest of explosives, carrying them to the beds of the four-wheel-drive Land Rovers we've driven into this for-

Photographs by Antonin Kratochvil/
Dot Pictures

est. The men work quickly and confidently. Each wears the uniform of France's Département du Déminage: blue coveralls, made from special antistatic material, with their pant legs tucked into the tops of high rubber boots. Each démineur's hands are gloved, too, as protection against any mustard gas or phosgene or chlorine that might seep through the rusted shells to blister or even kill the men instantly.

Twenty more minutes of bomb-collecting passes. Then another hour. The démineurs work steadily. They lift the bombs from their long sleep on the forest floor and, being careful not to trip over the tree roots or rusty trench wire as they cross the forest, they gently lower each shell into the wooden transport racks in the Land Rovers. The dark, pitted skins of the bombs are corroded and flaking; the bombs themselves smell damp and old–like the darkest corner of an unused basement.

A red line demarks forbidden ground

After three hours, I survey the forest we're clearing. There are still bombs everywhere. It seems we haven't even started working. My interest shifts, and I walk away, deeper into the trees. These forests were home to some of World War I's worst fighting. And back in mid-November 1918, just after the Armistice, the hills above Verdun were so thick with unexploded bombs and grenades (plus the still-uncollected dead) that the French Government simply cordoned them off. In fact, they closed nearly 16 million acres above Verdun, placing them inside the Cordon Rouge, the "red line." Much of the area has been closed to visitors ever since by fences with big, red-lettered signs that read *TERRAIN INTERDIT* ("forbidden ground").

A breeze has autumn's final leaves fluttering in the canopy. At my feet, a trench winds across the ground; it's deeper than a man is tall. I follow it. Its wooden supports (which once kept it from collapsing under the shelling as they now keep it from crumbling) remain in place–though the wood has rotted and become painted with dark moss. Where two trenches intersect, there is a 1918 vintage of liquor bottles among the mushrooms and downed leaves. Farther along, in the trench's bottom, I find the sole of a man's boot and a rusted canteen. A few steps beyond that, the ball-like end of a human thigh bone protrudes; it has shattered along its length and looks like a dagger. I lift the bone, then toss it up and down in my hand. It's pale; clean and white. It feels light but solid, like a hunk of cork. I let it fall back to the leafy trench.

The démineurs estimate that today, 75 years after the end of World War I, 12 million unexploded shells from that conflict still lie in the soil near Verdun. Millions more await discovery in the battle zones along the Marne and Somme rivers, southwest and northwest, respectively, of where we now stand. And, of course, millions of still-undiscovered bombs from World War II remain embedded in the beaches of Normandy and Brittany. Everywhere in France–in potato fields and orchards, under town squares and back porches–the fallout from two world wars has turned the national soil into an enormous booby trap.

Since 1946, the year the Déminage department was officially established, 630 démineurs have died in the line of duty. In that time, the department has collected and destroyed more than 18 million artillery shells, 10 million grenades, 600,000 aerial bombs and 600,000 underwater mines. Those in a position to estimate the démineurs' progress admit they're not sure how far along the de-mining of France is. They'll freely admit that, through the efforts of the démineurs, more than two

In a harvested field along the Chemin des Dames, Remy Deleuze shows how a poison gas shell is handled.

This article results from research the author has done for his upcoming book Aftermath: Cleaning Up A Century of World War, *to be published by Pantheon.*

Despite a protective suit and wrapping of the bomb, a colleague almost died when gas got under his mask.

million acres have been reclaimed from the explosive and toxic tools of war. Still, when pressed, they'll allow that at least that many acres, littered with unexploded bombs, are still cordoned off. They'll also say that, because not all bombs are found in the ground-clearing process, even places considered safe continue to spit up unexploded ordnance. In 1991, for instance, 36 farmers died when their machinery hit unexploded shells. Another 51 citizens were injured when they happened on a bomb unexpectedly. It is the job of the démineurs–123 men in 18 districts stretching the length and width of France–to clean the place up.

We are now at lunch, six démineurs and myself, in a fine little Alsatian restaurant in the village of Eix-Abaucourt, a wide spot in the road between Verdun and Metz. As we eat herring in white wine, then sauteed chicken breasts in cream sauce, I'm listening to the chief of the démineurs, a sturdy, crew-cut man named Henry Belot; he's giving me a taste for how many bombs are still around. In 1991 and '92, he says, as the French national railway dug a new bed for its TGV bullet train–for a line connecting Paris and London through the new Channel tunnel–the démineurs in that region, home to the battlefields of the Somme, were on constant duty, with daily collections of five tons of bombs being the norm. Miraculously, in the two years of digging the railbed, no one has been injured. The same record can't be claimed by the project's excavation machinery. So far, Belot says, four front-end loaders have been destroyed by buried bombs, as have a number of earthmovers. "They still keep digging," he says. "The railroad is a point of French pride."

"Here's another story," says a stout, blond démineur named Christian Cleret. "Just recently, a farmer near Soissons was tilling his beet field along the Aisne River. There was a large German offensive there in 1918, and apparently not all of the bombs have been cleaned up. The farmer's implement hit a buried shell. He gave his life among the furrows."

A fire set over a hidden shell–Boom!

Henry Belot tells of an explosion the previous winter. A group of five lumberjacks was working in the steep hills of the Argonne Forest. It began to snow, so the men built a fire to warm up. Unknowingly, they had set their fire over a bomb just beneath the dirt's surface. *Boom!* All were killed.

What's the démineurs' least-favorite type of bomb? I ask. "The toxic ones," they all reply. I ask why.

"Two reasons," Belot says. He lifts his right hand into the air, holding it as if he's gripping something loosely. "First, you never know how solid their skins are. They are often very rusty, so they may leak gas and kill you as you lift them. Also, they are harder to destroy."

To destroy the usual explosive shells, I am told, deep pits are dug, which the démineurs then fill partway with the bombs they've collected. Then they attach plastic explosives to the top of the pile and blow the whole thing up. "The blast is directed straight into the air," another of the démineurs says. "No one gets hurt."

Until recently, toxic bombs had been detonated in the English Channel. On a beach with a 50-foot tide range, démineurs would drive out on the flats at low tide, dig pits and carefully stack toxic shells in them, attach explosives and unreel wire back to the high-tide mark. At high tide, when the pits were underwater, the charges would be set off, exploding the shells, burning off the gas and sending plumes of the water a half-mile into the air. Protests from environmentalists stopped the practice, however; now the Déminage is looking for alternative methods.

I ask how many démineurs were killed or injured in the past year, and Belot tells me that 5 were killed, 11 hurt. "It was a good year," he says. "We didn't lose too many."

Then Belot takes a final bite of his chicken and, after swallowing it, says, "Every day, you can die. It's something you remember each morning. You never know when. You can't anticipate it. These bombs look old on the outside, but inside"–he points to his wristwatch–"they are as clean as a new clock. Out there is a bomb with your name. Today, if you lift that bomb, you are in the past." (Since we spoke, Belot has been gravely injured by a poison-gas shell. He survived, but to what degree he can expect to recover is not known as this story goes to press.)

Christian Cleret puts down his silverware and lifts a piece of bread. The démineur takes a bite, then points the rest of the bread at me. "It is very sad when one of us dies," he says, "since all the other démineurs know him. There are so few of us, we are all friends, we know each other's families. When one of us dies, it is very sad."

Then, for a long minute, no one says anything more. I look around the table; everyone has finished eating. All of the men are staring down at their plates.

Wheat, potatoes–and live ordnance

The next day, a misty Wednesday, the final day of September, I'm in another Déminage Land Rover, rolling through the flat farmland just north of the Marne River, 90 miles northeast of Paris. The brown and furrowed earth in this part of France is nearly shaved of trees, and in every direction I can see the horizon as it bends against the dark, stormy-looking sky. It's harvesttime, and the fields are full of farm machinery. The farmers of this region serve up much of France's food; its potatoes and sugar beets and wheat come from here. In this century, six different battlefronts have moved through the area. The remnants are everywhere.

We're rolling down an empty two-lane road, looking for a tiny village, but it's taking us longer to get there than we'd figured because we have to keep making stops. Every mile or so, a bomb stands along the road's shoulder like a miniature, dirt-encrusted obelisk. Each bomb has been uncovered by a farmer who has climbed down from his harvester, lifted the bomb from the furrow lines and lugged it to the roadside. These bombs are known as "incidentals."

A démineur named Remy Deleuze is telling me the history of this road between the fields. It is called the Chemin des Dames–the "Path of the Women"–and got its name when King Louis XV's daughters used it for carriage rides through the countryside. It was also the site of two major battles in World War I. The first was a failed French counterattack in April 1917, when more than 11 million artillery shells were dumped on the well-fortified Germans. The second was on May 27, 1918, when in four hours of furious shelling more than 700,000 German bombs fell, allowing the Kaiser's army to blow through the dead and dazed French Sixth Army like floodwaters through a picket fence. On that day, in one bound, the Germans leapt 13 miles closer to Paris, the largest single-day movement of the war till then. "That was a bad day," Deleuze says, "a terrible day for France."

Deleuze, second in command of his squadron, is just 27 years old. As we roll down the Chemin des Dames, he sits on the passenger side. Driving is another démineur, a man named Patrice Delannoy. Delannoy is short and solid, with intense gray eyes. His hair is cropped and dark, and he has a thick, graying mustache. For the past half-hour, Deleuze has done all the talking while Delannoy–who is hard at work, scanning the road for bombs–has yet to say a word.

Up ahead, Delannoy spots another bomb in the roadside grass. After he brakes the truck to a stop, we walk closer. When Deleuze sees what kind of bomb it is, he claps his hands. "Ah!" he says. "A *crapouillot.*" It does not resemble the aerodynamic artillery shells we've been lifting for days; four pinwheel fins extend from its sides, and a shaft from its base. It looks like a large spear. Deleuze bends to lift the shell, his gloved hands grasping the bomb's nose and tailward shaft. He tells me that crapouillots are French-made cousins to the modern mortar shell. Their shafts fit into smooth-bore cannon barrels; when the cannon were fired, the crapouillots were spit out to fly short distances. The fins, he says, helped the bomb to spin, gyroscopically stabilizing it to enhance its accuracy.

Deleuze says that, though the fields around the Chemin des Dames have long ago been "officially cleared" by the démineurs, each year the earth continues to give off bits of deeper-buried ordnance, just as stones continually work their way to the surface of a New England farm field.

We return to the truck and start off again. Deleuze says that it will take centuries for some bombs to work their way to the sunshine. He waves a hand, then shrugs. "Any dreams France has of feeling completely safe from the First War," he says, "they are exactly that: dreams."

An artillery shell next to the beets

Delannoy brings the Land Rover to a stop once again, and Deleuze and I step out. This time we find a World War I British 155-millimeter shell sitting next to a house-size pile of sugar beets. The beets await a collection truck that will take them to a sugar refinery; the bomb awaits us. As Deleuze lifts the bomb from the ground, he tilts it back and forth. From inside the corrosion-pitted shell comes a sloshy *swish, swish.*

"Hear that?" Deleuze asks. "That's the mustard gas." As he walks the shell to the rear of the truck, Deleuze tells me that while the poison in each toxic shell is called "gas," it is generally fired as a liquid, which is

Dominique Milesi of the Metz squadron discusses a shell with the farmer who found it; 36 farmers died in France in 1991 from such encounters.

Shells are stockpiled inside of bases that are well guarded–and never publicized. Eventually all will be detonated far away from the public eye.

Démineurs carry shells into a pit where they will be exploded (left). The hole is shaped so that almost all of blast wave will go straight up (above), minimizing any damage to military site and surrounding area.

vaporized at the moment of explosion. He places the shell into the truck's rack, then slips a wooden shim beneath it to secure it solidly. "We find 900 tons of bombs a year," he says. "At least 30 tons of those are toxic." With his gloved hand, he scrubs at the shell's dirty, rusty skin. The gritty patina falls away, and stripes of white paint become faintly visible on the shell's body. He points at the rings: "These mean toxic."

We get back into the truck and keep rolling. Delannoy turns off the Chemin des Dames and follows the side road toward a clump of dark, prim, stone houses. Each house appears to have two rooms downstairs and two up; most still have their windows shuttered against the mist and rain. We pass a grove of trees, and beyond that a graveyard of French crosses from World War I. Then we follow the pavement through an opening between two buildings, and we're inside the village walls. We find the place we're looking for: No. 1 Place St. Georges. Inside a gravel courtyard, Delannoy stops the truck. "This is the home of Madame Painvin," Deleuze says. "She has a bomb in her garden."

Deleuze gets out and climbs a set of steps to the front door. He knocks, and Madame Painvin opens it. She appears to be about 30 years old.

"I'm from the Département du Déminage"; Deleuze announces himself.

"Ah," says Madame Painvin, "the bomb is across the road. I'll show you. Let me get my shoes."

A minute later, she is leading us out of the courtyard and across the narrow street to her walled garden. The contents of the garden have pretty much been picked through. In the far corner, a thick shrub is growing against the garden wall, and Madame Painvin stops walking and points at the bush.

"There," she says. "Get it out of here."

Remy Deleuze slips on his gloves, drops to one knee and, reaching between the base of the shrub and the wall, finds an unfired artillery shell with its propellant cartridge still attached. He lifts the shell from behind the bush and sets it gently on the ground at our feet. It looks like a two-foot-long bullet. "Well, what's this?" he says. "An unfired 75-millimeter shell. American. From the Second World War."

"Get it away!" Madame Painvin says, almost shouting. "Get it out of my garden. My children found it yesterday. I looked out the window, and they were playing in the garden with it."

"Certainly, certainly," Deleuze responds, "but I think there are more surprises here." He reaches through the shrub's branches into a deep cavity in the wall and extracts another American 75. He lays the shell gently on the dirt and carefully examines it for danger signs.

Then, still kneeling, he hands both bombs to his partner. As Deleuze stands, slapping the grit from the knees of his coveralls, he says, "*Voilà!* No more bombs in the garden today."

As we start walking toward the truck, Deleuze tells Madame Painvin the probable scenario: back in World War II–most likely during the Allied push from the Normandy beaches toward Germany in late 1944–an American soldier set these bombs into the wall's crevice during a skirmish, then forgot to retrieve them. It is, he continues, the kind of thing he sees all the time. "The démineurs," he says, "we make 11,000 stops at citizens' houses each year. To collect shells and grenades."

As we leave, Deleuze smiles and shrugs. "It's nothing strange," he says. "Only the usual story. The soldiers moved on. The war moved on. The bombs stayed."

Delannoy steers the truck down a series of different farm roads, and near Soissons he turns inside a fenced gate. There's a sign wired to the fence. It says: KEEP OUT. THIS AREA IS BOOBY-TRAPPED. Deleuze jerks a thumb at the sign. "This keeps the curious away."

Inside the gate, a grassy berm blocks a view of whatever is at the end of a long driveway. As our truck rounds the hill, I see the arched stone doorway of an old fortress. Carved into the keystone is the date 1880. "This is Fort de Montbérault," Deleuze says. "Our depot."

Delannoy steers the truck through the arched entrance and inside the walls. Just past the main door is a fortified yard the size of a basketball court; it is stacked with row upon row of shells, mostly the 155-millimeter size. It looks as if someone has taken hundreds, maybe thousands, of rusting, industrial-size fire extinguishers and stockpiled them one atop another. "Ah," Deleuze says, "look at this. The legacy of war."

We drive beneath a few more arches, passing through still more bomb yards. Then Delannoy stops the truck near a series of arched doors beneath an earthen revetment. He gets out and pulls a wheeled cart from inside one of the arches. As he and Deleuze unload the truck, rolling and stacking each size of shell in its respective area, I ask Deleuze how he got started in the Déminage.

"The job was there and I took it," he says. "Most people in this work know someone who does it, who invited them in. It's a fraternity, which helps to protect the se-

Adrien Masson gives a wide berth to live munitions stored outside a Déminage depot in the Metz region. Round objects are mines that were moored just under surface of sea; that with fins is an aerial bomb.

Adrien Masson and Christian Cleret relax over lunch; the other patrons have no clue to what these men do.

lectiveness and secrecy of what we do. Myself, I had an uncle who was a démineur. I was getting out of school, and one day he said, 'I have a job for you, if you want it.'"

As he finishes unloading a half-dozen 105-millimeter shells, I ask Deleuze if he has a family. After letting the question settle for a minute, he nods. "I have a wife and a 3-year-old son," he says. "We have a new baby coming. This time, I hope for a girl." He smiles.

How does his wife feel about the Déminage?

"We don't talk about my work," he says, turning his cart toward the truck again. "My wife, she knows about my job, but we keep it quiet. My family and friends, they only know I work for the Ministère de l'Intérieur. It's that way for all démineurs, which is how the government likes it. Citizens would be alarmed if they knew how many bombs were still spread across our country."

As Delannoy and Deleuze return to the truck, positioning the rolling cart beneath the tailgate, they pause for a moment. "The démineurs like their life of secrecy, too," Deleuze says. "Otherwise, people would bother us all the time–and we have enough worries without that. *Boom!*" He makes an explosion gesture, and his hands fly in the air. "I guess we are brothers to the bombs," he says, unloading another shell. "Like the bombs, the démineurs are happiest when left alone."

Late on a Friday night I drive back to Verdun, passing the 13th-century cathedral in Reims, its squared-off twin towers silhouetted against a dark, misty sky. Like the towers, my plans are symbolic yet vague. I figure I'll spend Saturday and Sunday in Verdun, coming to know why men bomb and shoot one another. I'll picnic in the hills and walk among the half-timber buildings of the historic towns.

Despite the homey hotel and the fine poached pike I have for dinner (with plenty of wine), I don't sleep very well. By 6:45 the next morning I've left the hotel to drive into the World War I battlefields in the hills above town. The road I'm following runs north along the banks of the Meuse; the river's smooth water slides past in the growing daylight. Poplars line both sides of the road at intervals: it's something out of a French travel poster. In the village of Bras the road turns away from the river, and I see a large white arrow that points up a side road. The words on it read: "*Louvemont, village détruit.*"

Louvemont is one of the area's nine obliterated villages, one of the places scraped from the earth by a single day of war. At 7:15 on the snow-bright morning of February 21, 1916, after an eight-month buildup, German shells began to fall in the hills around Verdun, and Louvemont was in the way. By noon of that day, no habitable structure was left in the village, and the heat from exploding bombs melted the snow that only hours earlier had coated the fields and rooftops.

The bombing went on all day. It was the most fearful offensive of World War I. Trees were shattered. Bombs cratered the landscape, then cratered the craters. The barrage continued through the afternoon, and, in the long string of trenches above Verdun, the French forces–hunched over and praying–waited for the shelling to end. Thousands of Frenchmen were already dead from shell fragmentation or direct hits. The rest were merely deafened and dazed. In the bottom of the trenches, snowmelt began to refreeze.

Cold mud, bombs and bayonets

As the sun began to set, the first wave of German infantry advanced, employing their newest weapon: the flamethrower. Downed trees and brush exploded into fire. Smoke fouled the air. The Frenchmen who could still move crawled to the tops of their trenches. They steadied their rifles on the mud and began firing. Many Germans fell. Others kept coming. Mortar shells flew. Soldiers were exploded. Still they kept coming and soon reached the trenches. Skulls were pulped with rifle butts. Men were pinned to the cold mud with bayonets. Soldiers from both sides were shot at close range. Others were blown apart by grenades.

The Germans had made a tactical mistake, however. They had bombed too long and had not allowed time for the infantry to clear the battlefield. They had also miscalculated the French Army's ability to defend itself. At about 6 o'clock, as the midwinter night began to settle on these fields, the offensive stalled. The German infantrymen could do nothing but bed down in the open fields. In the dark, the French opened a counteroffensive. They moved silently along their trenches to get close to the Germans, then crawled up and over and

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slithered closer. More soldiers were blown up. By 10, the battlefield was quiet again.

In the hills above Verdun, that kind of fighting went on for months. Before the siege was over, nearly a million souls had been chewed up in the maw of war. In what may be the most grisly statistic ever, fewer than 160,000 identifiable bodies were recovered. The rest were impossible to recognize or had simply been swallowed up by the explosions and mud.

The sun is just coming up now, rising over the forests and long, rounded ridgelines above Verdun. The road climbs a hillside, then flattens. And then I am in Louvemont.

There's not much. A marble monument. A chapel. A few beech trees. To this day, after all these years, the ground beyond the beeches is broken and uneven. The bombs did more than tear up the soil. They destroyed the village, too. There is nothing left of Louvemont. No little stone houses. No barns. No town square with a fountain. Nothing.

I hurry back to the car and drive from Louvemont. The road continues to twist and turn uphill. Above the treetops to the right–sticking up like a 15-story concrete missile–is the tower of the Ossuary of Douaumont, strikingly white in the morning sun. The tower dips behind the treetops as I crest the hill, and now ahead of the car is the National Cemetery, where 15,000 crosses of white marble jut from the perfectly tended grass. The crosses spread across the hillside–each of them was once a life. A rosebush is planted at the base of each cross, and the roses are just beginning to open for the day, tens of thousands of crimson buds in the morning light. Yet they number nothing compared with what is inside the ossuary, the quarter-mile-long blockhouse and spire that waits at the upper end of the huge cemetery. Inside that building, the remains of 130,000 human beings are entombed.

The ossuary is made of white stone. Its shape is long, rounded and low, like a loaf of French bread. From its center rises the 15-story spire, which has been fashioned to look like an artillery shell. The interior is a narrow hallway with a rounded ceiling that runs the building's length; it feels like the inside of a gun barrel. The floor is perfectly laid marble. The only light inside comes from sun shining through stained-glass windows. Dozens of granite tombs are arranged in alcoves that have been built into the ossuary walls. There are no names on the tombs; lettering denotes the sector of the Verdun battlefield from which the remains were taken. Beneath the marble floor are the remains. The floor plan has been divided into sectors that correspond with those on the tombs; the bodies–or parts of bodies–that came from those zones and could not be identified are buried here.

I walk outside to take a deep breath of the cool, sunny, autumn morning. I start across the gravel toward my car, then see a row of windows in the white stone along the building's base. I kneel and peer inside. There are bones everywhere, as far as the daylight can penetrate. Vertebrae. Skulls. Tiny little bones that seem fragile and white, like lumps of talcum powder. There are ribs and ribs and ribs; the bony remains of thousands of torsos are piled so deep that the jumble of rib ends looks like a fish's scales. In the window's center sits a jawless skull. It's been pierced behind the left ear and in the forehead. The holes are asymmetrical, no doubt the legacy of the British officer Henry Shrapnel, who was the first to put bullets into an exploding projectile.

In back of the ossuary there is a small shop with books

Sculpture at Douaumont honors a fallen French hero; on horizon is ossuary, a mass tomb of unknown soldiers.

and slides for sale. There is a multimedia show devoted to the siege of Verdun, too. When I enter the shop, I find that the show does not begin until 10 o'clock. I ask the shopkeeper about it, and he says that no one ever visits the ossuary before 10. "Why would you want to spoil a new day with a place like this?" he replies. I'm drawn to the rows of stereoscopic viewers lining one of the walls. In three-dimensional, black-and-white images, the Battle of Verdun comes to life. The French soldiers in the pictures are slightly built and pale. They seem poised on the edge of moving, of gesticulating, of shouting to me. Most are smiling, most have thick mustaches and bright, dark eyes. In some of the photographs, the men are bivouacking in the remains of obliterated villages. In others, they are digging new trenches or buttressing with wooden supports the trenches they've already dug. Their uniforms are muddy, but they look happy and cocky–even a little hopeful.

Finally, there's one picture that makes me pull my head from the viewer with a snap. A severed forearm lies on the mud. Ahead of it, there's only the bald, hilly horizon. The arm is beautifully preserved. It's just lying there, clean from the rain, the fingers of the hand slightly opened, palm to the sky.

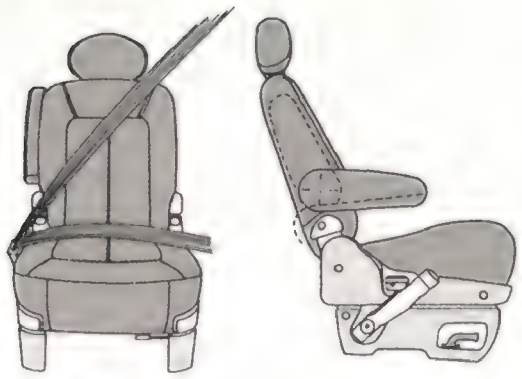
The shopkeeper, who's seated near the cash register, asks, "What did you see?"

I tell him about the arm and then walk over to where he's sitting. He is skinny and perhaps 35 years old. In front of him are nature handbooks for sale. The books have pictures of birds and trees on their covers; they're intended for use in the sectors of surrounding forests that have been cleared by the démineurs and opened again for picture-taking and nature walks.

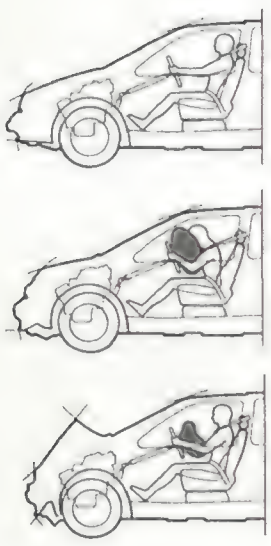
To make conversation and pass the time, I say to the man, "I wonder what kind of arm that was? A French arm? A German arm?"

The man frowns for a long second. He shrugs. "What does it matter?" he says.

The Quest is equipped with a standard driver's side minivan airbag. Overprotective parents need protection, too.*



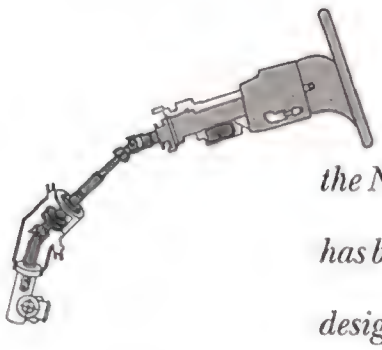
Three-point safety belts as well as head restraints are found on the outboard positions in both the second and the third rows.



The Nissan Quest features an energy-absorbing front crumple zone, strategically placed safety stops and hood buckling creases.

Overprotective parents

A standard 4-wheel Anti-lock Braking System on the GXE model helps maintain greater steering control during emergency hard braking.



Similar to the front crumple zone, the steering column in the Nissan Quest has been specifically designed to absorb impact energy in the event of certain frontal collisions.

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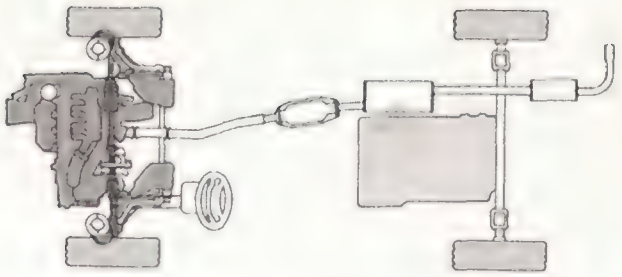

The V6, 151-hp engine rests in front, which gives added weight over the drive wheels, which gives the Quest better driving traction, which gives you added peace of mind.

In the event of a side impact collision, passengers in the Quest enjoy the added protection of thoughtfully designed steel side-door guard beams.

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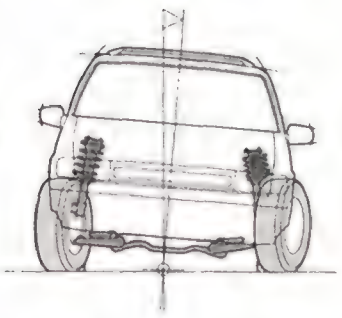

A front stabilizer bar helps keep the Nissan Quest level during cornering or lane changes.

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when used with seat belts. Nissan Quest was designed to meet 1994 Federal Motor Vehicle Passenger Car Safety Standards except models with privacy glass.

By John Ross

An aquatic invader is running amok in U.S. waterways

The zebra mussel, a stowaway no bigger than a pistachio shell, has a choke hold on the Great Lakes–and is moving in every direction

Biologist David Garton (opposite) retrieves a clump of zebra mussels from Lake Wawassee, Indiana. Above, the invaders find a home on subsurface vegetation.

As you stare out across the sun-dappled waves of western Lake Erie, it's hard to imagine that you're witnessing one of the largest invasions America has seen this century. Dip below the surface into the underwater world, however, and it's inescapable: millions upon millions of invaders carpet the lake bottom.

They are zebra mussels, small mollusks from Eastern Europe whose prolific reproductive habits fall somewhere between those of a rabbit and a fruit fly. Six years ago the lake bottom looked like any other–brownish muck, a few rocks, some old tires and a scattering of native clams. Now, I grab a handful of zebra mussels with my wet suit glove and tug; the interconnected reef of mussels gives a little but snaps back intact.

Within the space of eight years, this invader from Europe's Caspian Sea has forced the shutdown of a large utility and hampered the operations of others, generating an act of Congress in the process. The mussel threatens to restructure the ecology of the entire freshwater system in this country; efforts to control it will have cost a projected $5 billion by the end of the century.

Indiana University biologist David Garton and I hand bucketfuls of these creatures up to assistants waiting in the dive boat. At first, I find zebra mussels unremarkable. A bunch of them looks like a large clump of dark, stale caramel popcorn. Alone in the palm of my hand, one individual seems disappointingly small. It is not much larger than a good-sized pistachio shell; attractive, alternating stripes of brown and white account for the popular name. Its Latin name is *Dreissena polymorpha*; the species name, meaning "many forms," is an acknowledgment of its adaptability.

It's not, however, until you understand this mussel's life cycle and Herculean metabolism, Garton tells me, that the creature appears truly remarkable. Its most destructive habit is its ability to cling to almost any submerged hard surface in countless droves. Unlike any of North America's 300-odd native freshwater mussels that burrow in the mud or sand, zebra mussels cling to hard surfaces with Lilliputian tenacity by means of small but tough byssal threads, as do saltwater mussels. Nothing speaks more of the *Dreissena*'s eclectic ways than the red Camaro that Canadian police pulled from the water on the northwestern shore of Lake Erie in March 1989. After only eight months underwater, the car was covered almost three inches thick in zebra mussels. No material on the quickly dubbed "mussel car" was free of the mollusk: cloth, nylon, rubber, plastic, fiberglass, glass, vinyl or metal.

Humorist Dave Barry, reporting that scientists trawling for dead lake trout found a brassiere bearing a host of colonizing zebra mussels, denounced the critters as the "Sex Maniacs of the Sea." Industries and recreational boaters, however, were learning that the invaders were no joke. The mussels started to occlude intake pipes, coat boat hulls, sink navigational buoys and litter beaches with their sharp shells.

Zebra mussels came here just as many immigrants have come: in the hold of a ship. Sometime in 1985 or 1986, biologists believe, their microscopic larvae, known

Photographs by Robert Rattner

Immigrants include, from top, an Asian crab found on an oil rig; ruffe, a European fish, now thriving near Duluth; Japanese horn snail, at home on Pacific coast; European flat oyster, a fixture in Maine.

as veligers, commenced a transatlantic trip from an Eastern European river port. An empty freighter, perhaps a grain carrier, opened its stopcocks, drawing millions of gallons of water, various organisms and sediment into its ballast tanks. Stabilized with the extra weight, the ship set out, a mobile aquarium.

At its destination on Lake St. Clair, between Lakes Erie and Huron, the ship jettisoned its ballast water. All the organisms on board probably perished in the new environment, with the exception of an unknown number of zebra mussel veligers. On that day, an improbable combination of ideal conditions–temperature, food sources, water quality–converged, and the veligers lived.

On June 1, 1988, researchers associated with the University of Windsor in Ontario pulled up a stone near the southern shore of Lake St. Clair that "looked like it had a wart on it." Zebra mussels had gained a toehold in North America. Today, the mussel has spread throughout the Great Lakes, as far south on the Mississippi as New Orleans, as far north as Duluth, Minnesota, and as far east as the Hudson River in New York–all in the space of a half-dozen years.

Zebra mussels are the most recent and dramatic example of what is called "biological pollution," the accidental or purposeful introduction of foreign species into an ecosystem. Often free of the natural predators they faced at home, these species sometimes run amok, disrupting food chains and displacing native species. Unlike an oil spill, which sometimes can be contained and which eventually dissipates, many exotic species cannot be contained and they do not dissipate.

Good ideas that went horribly astray

The introduction of foreign species, of course, has been going on ever since human hunter-gatherers cultivated plants, domesticated animals and found trading partners. Dogs, house cats and horses are among the thousands of intentional introductions into North America. The starling, which appears across the United States, was introduced into New York City in 1890 by a bird lover who purportedly wanted to bring all the birds mentioned in Shakespeare to America (SMITHSONIAN, September 1990). Kudzu, a ground-hugging leguminous vine native to Japan, was introduced to the southern United States as a means of controlling erosion and providing cattle forage. It has run wild, routinely smothering trees and covering houses (SMITHSONIAN, December 1976). Few would argue that these introductions have profoundly changed our biogeography.

While many exotic species have been beneficial, some, such as the Mediterranean fruit fly, have been pests with large economic impacts. Yet others have seemingly blended into our "natural" environment almost unnoticed. One such species is a saltwater snail

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A teapot (above) taken from Lake Erie carries lots of baggage. In enlarged close-up (right), large and small zebra mussels cluster on top of one another.

found in rocky intertidal areas on the Northeast coast. Many New Englanders can identify the creature as the ubiquitous periwinkle; few, however, realize that it is an exotic that has decidedly changed the look of these shores. The bare, rocky appearance of the New England coast has much to do with the periwinkle, which clears the tidal zone of seaweed, allowing sediments to wash away. "Today," says James Carlton, head of the Williams College-Mystic Seaport Maritime Studies Program, "if anyone suggested that we introduce this European species to America, we would call it a disaster."

In general, relatively little attention was paid to the impact of freshwater and marine exotics–until the zebra mussel came along. "It's different on the land," says Carlton, "where it's easy to tell how the land has changed." Equivalent changes are difficult to identify in the aquatic world.

In fact, the percentage of species at risk is substantially greater for aquatic than for terrestrial species. According to the Nature Conservancy, 34 percent of North American fish species, 65 percent of crayfish species and 73 percent of freshwater mussel species are classified as rare or imperiled. The same numbers for land creatures are significantly less: 11 percent for birds, 13 percent for mammals, 14 percent for reptiles.

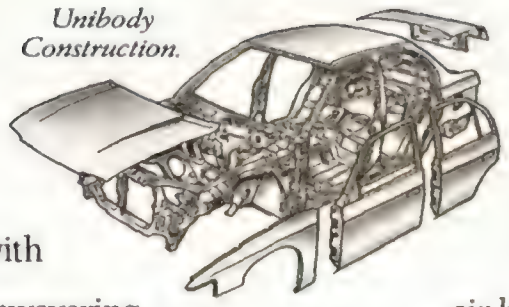
Cornell biologist Edward Mills recently documented 139 aquatic animal species that have become established in the Great Lakes alone. Most notorious of these are the Atlantic sea lamprey and the alewife. Sometime in the 1800s, the lamprey migrated through the St. Lawrence Seaway into Lake Ontario, where it became common. The Welland Canal, modified in the 1880s, bypassed Niagara Falls and enabled the lamprey to spread into the other Great Lakes. An eel-like, primitive fish, the lamprey attaches to the body of a lake trout or other fish and sucks its blood and flesh–often until the fish dies. As a result, trout populations crashed in Lakes Michigan and Huron and much of Superior; most other commercially valuable fish declined as well.

The most renowned aquatic invader before the zebra mussel, however, is the alewife, a thin, silver fish of the herring family that probably transited the Welland Canal during the 1930s. With no natural predators, its population exploded. One alewife was reported in Lake Michigan in 1949; less than two decades later, the alewife constituted 95 percent of that lake's fish population. Only when predators were introduced did its population decrease.

Introductions of aquatic exotics before 1970 were often deliberate, especially the transplantation of sport fish into new waters. Recently the rate of accidental introductions has risen–more in the past 10 years than in the previous 30 years combined, brought largely by ships. Today, an Asian clam is one of the most populous organisms in San Francisco Bay and threatens to disrupt the existing ecosystem. Biological pollution is not just a North American problem: American comb jellies (jellyfish-like organisms) threaten Black Sea fisheries, and toxic dinoflagellates, a kind of plankton, from our country have closed shellfisheries in Tasmania.

James Carlton and Jonathan Geller, a marine biologist at the University of North Carolina at Wilmington, re-

Chevy Chase, Maryland, writer John Ross has finished a book on the Middle Atlantic region as part of the new series The Smithsonian Guide to Natural America.



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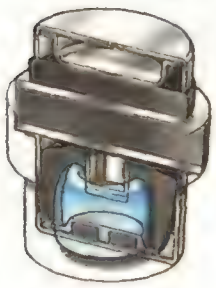

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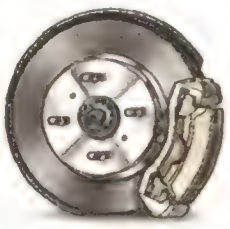

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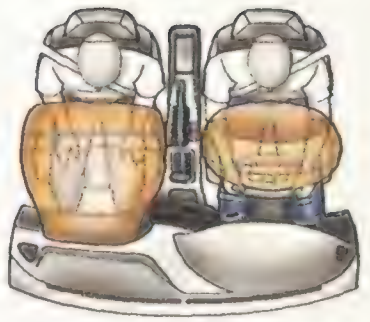

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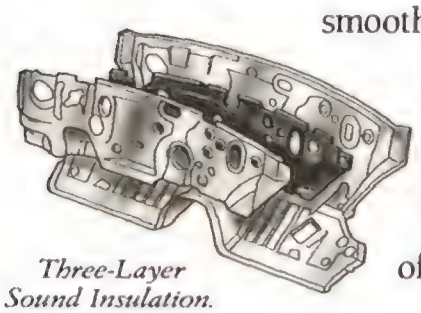

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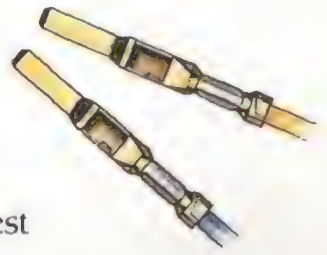

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Workers use high-pressure water to blast mussels from tank wall at Detroit Edison plant in Michigan.

Water level drops as they work; at the end, four feet of mollusks on floor are removed and taken to a dump.

cently sampled the ballast water in 159 Japanese cargo ships entering Coos Bay, Oregon. They found 367 kinds of marine organisms, including shrimps, crabs, fish, barnacles, sea urchins, starfish, worms, jellyfish, clams and snails. The immensity of the problem becomes apparent when you consider that 39,000 merchant ships sail the world's oceans.

Ships have regularly been using water as ballast for 120 years, so it's fair to ask why introductions are on the rise. The answers are multifold. New trade routes have opened with the formerly restricted countries of Eastern Europe and China, providing new possibilities for the exchange of species. Ships are faster and larger today, so the stowaway organisms have a better chance of surviving the voyages. In a quirky twist of fate, the cleanup of freshwater bodies both here and in Europe may also have hastened the coming of the zebra mussel.

While all of these conditions probably aided the arrival of the zebra mussel, the physiology and peculiar evolutionary history of the genus also contributed. *Dreissena* evolved millions of years ago in a large saltwater basin that is now broken up into the Aral, Caspian, Azov and Black seas. Today the Caspian is considered the world's largest enclosed body of saline water. Fresh water coming in from the Volga and Ural rivers, however, creates areas of very low salinity. Scientists believe that *Dreissena* evolved to tolerate freshwater conditions in those areas over time.

Two hundred years ago in Europe, during a frenzy of canal construction, zebra mussels started to move, appearing in northern European rivers that emptied into the Baltic Sea and into freshwater lakes, canals, rivers and estuaries throughout Germany, Eastern Europe, western Russia and even Great Britain. By the 1880s, they were reported to have blocked water supply pipes in Hamburg and Rotterdam.

Europe's saving grace was the existence of predatory fish with teeth and jaws strong enough to crush *Dreissena* shells. By contrast, few natural predators exist here in North America. Those that do, such as the freshwater drum, a fish, and the lesser scaup, a diving duck, are too few to inflict any real damage.

Even with the advantage of natural predators, Europeans learned through the years to coexist with the mussels by burying intake pipes under sand, designing their systems to be back flushed and poisoning the mussels with chlorine. North American utilities that depend on lakes and rivers had no protection when the bivalves swarmed into their intake pipes.

In 1989 the town of Monroe, Michigan, on the west shore of Lake Erie, 30 miles south of Detroit, was hit especially hard. Detroit Edison's Monroe Power Plant, with twin 800-foot smokestacks, dominates the shore of the Raisin River at its confluence with Lake Erie. This 3,000-megawatt generating station draws coolant water from the river at a rate of up to 1.3 million gallons a minute. The water travels through an open intake canal, then into two screenhouses where a series of devices filters out trash. The initial lines of defense are metal grids known as trash bars.

In six months 1,000 became 700,000

In February 1989, William Kovalak and Tim Walsh of Detroit Edison noticed between 500 and 1,000 zebra mussels per square meter on the surfaces of the canal leading to the screenhouses. Six months later, after the mollusks had spawned, the numbers jumped to more than 700,000 per square meter.

Like massive arteriosclerosis portending a major heart attack, the trash bars were 75 percent occluded, permitting flow in the 20-foot-deep canal to pass only through the top several feet. As the mussels grew, they formed druses, or tight clusters, that eventually broke off in the water flow. Swept downstream, some druses washed into the main steam condensers and smaller filters, causing blockages.

One by one, Detroit Edison "de-watered" each of the four units in the screenhouses, hiring a contractor to blast the mussels off the walls with high-pressure water (opposite). In October 1991, after Unit 4 had been left uncleaned for two spawning seasons, 30 tons of zebra mussel remains were taken out.

Nor was Detroit Edison the only utility with problems. The Monroe waterworks, ten miles inland on the Raisin River, was totally shut down for 56 hours in mid-December 1989. With only one intake pipe, 22 feet below the surface and one mile out into Lake Erie, the filtration plant was especially vulnerable to blockage by the zebra mussels. Wilfred LePage, an engineer and ex-marine who runs the plant, laughs about the drama four years later but still shakes his head.

Peter Yates

The invaders occluded this section of pipe being studied in a U.S. Fish and Wildlife Service lab.

The primary water source for about 45,000 Monroe citizens, the plant draws water through a 30-inch pipe to its pump house on the shores of the lake. From there the water is pumped underground nine miles to the main waterworks for treatment. In January 1989, workers there found zebra mussels in the first stage of the ozonator, a water-purification device. LePage speculated that the intake pipe itself must be infested with zebra mussels. By July, the clogged intake had reduced flow by 20 percent. On September 1, the plant lost suction entirely, with water moving only at a trickle for several hours. The blockage prompted LePage to chlorinate the raw-water pipe between the pump station and the plant. This was a mistake. After two weeks of treatment, the slimy soft tissue of dead mussels appeared in the raw water coming into the treatment plant. The worst, however, was yet to come.

Mussels (and ice) shut the town down

On December 14, intake was stopped entirely, because of zebra mussels and ice. Industrial users were told to shut down; restaurants, bars and schools were closed and residents were advised to boil their water. Fortunately for Monroe, the sun came out two days later, melting the ice and freeing the blockage.

By building a second intake and chlorinating incoming raw water, LePage has managed to keep the situation under control. The cost for mussel protection and prevention through 1992, including a new pump house for both the old and new intakes, was $790,000.

On the other side of Lake Erie, scientists and engineers at Ontario Hydro have spent more than $2.5 million on zebra mussels, including a search for ways to kill them. They want an agent or technology that is cost-effective and safe for the environment, and that doesn't require too much energy. It's a tall order.

Electrical fields can kill both veligers and adults but are too energy intensive, and fresh water is a bad conductor. Gamma irradiation also kills the mussels, but it takes a large dose to kill one small zebra mussel–the equivalent of using a jackhammer to drill buttonholes; researchers joked that irradiation would only create an angry 20-foot-long mussel. Acoustic shock does cause the veligers to settle prematurely, but questions remain on how to do it.

Ultraviolet radiation shows promise. Thermal shock (changing the temperature of the water quickly) can work but reduces the ability of the water to act as a coolant. Various coatings on the intakes and pipe interiors can stop the veligers from settling, but often the best materials, such as copper, eventually leach out into the surrounding area and are toxic to other life-forms.

The economic impact of the zebra mussel pales beside the possible ecological consequences. Each one of the small creatures draws a quart of water through its body every day, gorging on microscopic organisms. With so many of them, it doesn't take a mathematician to figure that the mussels filter a prodigious amount of water. In fact, scientists believe that they filter the entire volume of Lake St. Clair several times a day and the western basin of Lake Erie once every several days.

That is a good thing, up to a point, but it turns out that the organic material and organisms that pass uneaten through the zebra mussels emerge bound up in mucous packages known as pseudofeces. These fall to the bottom, unavailable to the small, plankton-eating fish on which larger fish depend.

This capability makes many biologists nervous. "You're basically changing the energy dynamics in a body of water," says Donald Schloesser, a fisheries biologist with the U.S. Fish and Wildlife Service. What normally happens is that the phytoplankton (microscopic plants) are eaten by zooplankton (microscopic animals), which are in turn consumed by small fish. Then, of course, large fish eat the small, and humans eat the large walleye and yellow perch in Great Lakes waters.

"Now," continues Schloesser, "imagine the zebra mussel voraciously eating the plankton. And what it doesn't eat it binds up in pseudofeces to sit on the bottom of the lake." The energy in the lake becomes benthic, or bottom dwelling, and much of the food becomes unavailable to the existing food chain.

None of the major fish populations have crashed–a relief to those who keep their eye on Lake Erie's $900 million sportfishing industry. Most scientists don't believe it's time to celebrate, however. "Ecological changes take time to play out," explains Schloesser. "But when the changes come, they can be profound."

Mussels move into a landlocked lake

It's June, and the veligers are out in force in the waters of Lake Wawassee, Indiana's largest natural lake, located 100 miles east of Chicago. The lake has drawn the attention of David Garton and his colleagues because it's one of the few inland lakes afflicted with zebra mussels.

Out on the lake, Garton takes a sample of the veligers and plankton in the water. Later we look at the menagerie of miniature creatures under a microscope: spiny, energetic rotifers; flagellates that look like tree trunks in winter; and thin, skyscraper-like diatoms.

In the midst of these curious forms we find a zebra mussel veliger. It's round, with a light shell just visible. On one side, cilia (tiny locomotor hairs) wave frenetically. I'm reminded of an oddly shaped galleon with oars far too small, not quite getting to where it needs to go. For up to four weeks the veliger will float, eating smaller plankton, growing and developing an organ called a foot. Glands in the foot will eventually produce

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the byssal threads that the veliger needs to attach to a hard surface. Thousands or millions of veligers settling on a boat hull are all but invisible, yet feel grainy and rough to the touch.

As few as 1 percent will survive, and life doesn't get much easier for those that do. Sexually mature at 12 months, they spawn from late spring until fall, the females spitting out upwards of a million eggs. In this spawning frenzy, the adults lose 50 percent of their body mass. The following cold winter then takes a devastating toll of these weakened creatures.

Even so, this reproductive strategy remains highly successful from an evolutionary perspective. With such large numbers spawning, far more than enough survive to cause tremendous bursts in the population.

The big losers in the zebra mussel invasion are the native freshwater mussels, known as unionids. This fact is painfully apparent when Garton and I drop to the bottom of Lake Wawassee in our scuba gear. We see clumps on the sandy bottom that appear, on first inspection, to be rocks overwhelmed with legions of zebra mussels; they are, in fact, the shells of dead native clams. Thomas Nalepa of the National Oceanic and Atmospheric Administration has found that the zebra mussel has virtually wiped out 18 species of native clams in Lake St. Clair.

The spread of the zebra mussel is inevitable, especially with barge commerce and the way that the Mississippi River system connects so many of the natural waterways in this country. It is not uncommon for barges–slow-moving, rarely cleaned craft–to travel 12,000 miles a year. Passage into noncontiguous water sources, such as Lake Wawassee, is rarer, limited so far to fewer than a dozen known lakes, but occurs nonetheless. James Carlton counted more than 20 means by which the zebra mussel could travel outside natural waterways, from veligers being carried in the webbed feet of ducks to larvae and adults being transferred via bait buckets.

In the standard pattern of the introduction of an exotic, the population of the invader shoots up at first, then falls back when resources, such as food supply, become limited and the population hits what's called a genetic bottleneck. Usually the gene pool of an introduced species does not reflect the genetic diversity of its entire species because only a few individuals were represented in the colonizing effort. Here again, *Dreissena* confounds the biologists. Zebra mussels show remarkable "plasticity," a broad genetic base. A more diverse genetic base means that the species will have good genetic tools with which to adapt to new conditions, such as warmer waters to the south or colder to the north.

An immediate and direct response to the zebra mussel invasion has been the passing of the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, an attempt by Congress to curtail organisms entering the country via ballast water. On April 8, 1993, as part of the act, the United States assigned mandatory salinity levels to the ballast water carried by ships entering the Great Lakes. It remains to be seen how effective the enforcement of this law will be, considering the volume of traffic and the difficulty of regulating the international fleet. In addition, no one has yet devised a cost-effective method for raising the salinity of the ballast water–and thus killing all freshwater organisms–if a ship is caught with freshwater ballast deep within the Great Lakes. Even minor changes in the salinity would require truckloads of salt and the ability to mix the water in the hold. Currently, the only recourse is for the ship to head back out to sea, which could involve a trip of many days.

Nevertheless, the law is a positive step toward curtailing freshwater biological pollution. "Without such steps," says Carlton, "the life-forms in our waterways and those around the world could become homogenized." A relatively small group of hardy, aggressive, highly successful species could dominate much of the world, at the expense of native species.

The final word on zebra mussels? "This country's freshwater ecosystems are so subtle and interconnected, it's pure guesswork to predict what impacts the zebra mussel will have down the road," says Donald Schloesser.

The map of the United States above his desk has red dots marking the spread of zebra mussels. Schloesser has stopped updating the map because it takes too much time. Now he monitors the spread on computers–a general following the movement of an enemy army.

We'll have to restructure our strategies to fight invaders that won't surrender and can't be defeated. That probably means keeping other potentially destructive exotics from entering the country in the first place. To the barricades!

In upstate New York, clusters of invaders surround submerged rocks below a spillway near the Erie Canal.

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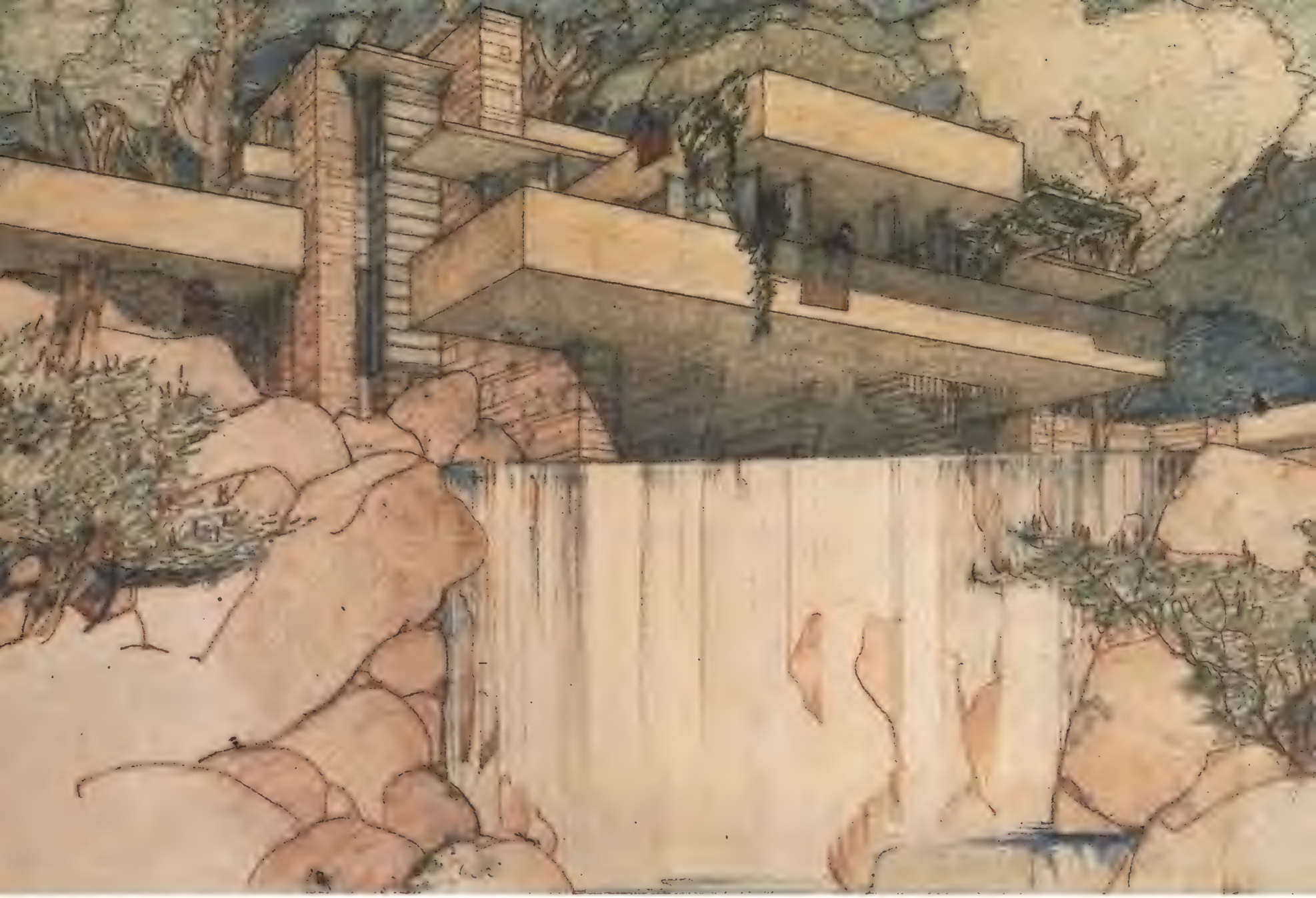

Fallingwater–its concrete terraces cantilevered over swift-moving Bear Run in Pennsylvania, is known worldwide. Wright's 1936 perspective view of the house is in the exhibition at the Museum of Modern Art.

By Meryle Secrest

A great architect with love for nature and lots of fight

His reputation thrown into doubt after early success with his Prairie houses, Frank Lloyd Wright had a stunning finish

Westhope, the house he built for his cousin Richard Lloyd Jones, is the subject of one of the many telling incidents in Frank Lloyd Wright's long career. Almost as soon as it was built, the roof began to leak. Lloyd Jones, in a fury, went to his desk and called his cousin. "Damn it, Frank," he raged, "it's leaking on my desk!" To which Wright calmly replied, "Richard, why don't you move your desk?"

Wright, imperious and cocksure, the architect whose roofs always leaked: this view coalesced during his lifetime. If he was anything, the great and flamboyant architect was considered a law unto himself, an aberration, a historical anachronism; hardly the seminal figure he loudly proclaimed himself to be.

That was the verdict when he died in 1959. But Wright's reputation has experienced a strong revival; nowadays, few contest the claim that he is the greatest American architect of the 20th century. In recognition of his new eminence, on February 20 the Museum of Modern Art in New York City will open the largest retrospective exhibition it has ever devoted to an architect. Curated by Terence Riley and Peter Reed, it will give a

complete historical overview of Wright's work. Beginning with his earliest engineering drawing of 1885, it ends with the projects he was working on at his death at age 91. The bulk of the 500 drawings, models and photographs is being lent by the archives of the Frank Lloyd Wright Foundation in Scottsdale, Arizona.

The exhibition at MOMA will be complemented by other shows. The Metropolitan Museum of Art plans to exhibit Wright's decorative designs; the Lobby Gallery in New York City will display Pedro E. Guerrero's photographic portraits of Wright; and prints from the Wasmuth folio, a German publication famous for its 1910 monograph on Wright's work, will be on view at Columbia University's Temple Hoyne Buell Center. Further exhibitions will follow, since the archive that Wright left represents an almost inexhaustible legacy.

More likable than most people realize

Although Wright's professional status is secure, he is still often portrayed as someone so out of touch with the human needs of his clients that his houses were uncomfortable. As a person, he has been viewed as self-absorbed and egotistical, combative and deliberately contradictory about himself and his motives. There is truth to these perceptions, but a careful perusal of the voluminous letters and writings in Wright's archive, which is now open to scholars, shows a man far more tormented and likable than most people realize–one who was impulsive, mercurial and all too human. He was also absolutely faithful to his inner ideal of what American architecture should be. To the extent that Wright ever fell from grace, it was not because he had forsaken his high ideals, but because fashion abandoned him. He was always the same man, lonelier perhaps, angrier, ignored when not actually attacked, still pursuing his private demon even when none of his designs were being built. The comment once made by the late Chloethiel Woodard Smith, a Washington, D.C. architect, seems particularly appropriate: "Architects have been given the great gift of walking through golden halls that may never exist." Wright, it could be argued, was doing that almost as soon as he was born.

Wright's mother, Anna Lloyd Jones, one of a Welsh immigrant family of ten, had watched her father and brothers carve a homestead out of the wilderness, becoming carpenters in order to erect their first houses. The Lloyd Joneses had left Wales in the mid-1840s under a cloud; for generations their family had been preachers, but with such nonconformist views that they were persecuted even by other Protestants.

Anna was determined that the family would overcome its outcast status. One of her brothers, Jenkin Lloyd Jones, eventually became the minister of a famous Unitarian church in Chicago, and Anna's plan was that

In 1939, with recent success of Fallingwater and other works, the confident Wright cut a dashing figure.

A focus on the hearth, as in children's playroom of his Oak Park home, was a major theme of his work.

Alteration of his Oak Park dining room in 1895 was early sign of Wright's move away from classicism.

Frank would build churches and other noble edifices; ". . .they are just alike; only Jenkin preached, Frank builds," she wrote. The family's chapel in an idyllic Wisconsin valley near Spring Green was the first building on which Wright, as an adolescent, worked. Talking his way into a job with its architect, J. Lyman Silsbee, at draftsman's wages of $8 a week, he soon learned the basic elements of his craft. Then Wright landed an even better job with Adler and Sullivan, the largest architectural firm in Chicago. By 1887, when he was just 20, that firm was at work on the Auditorium Building, the city's largest building. Wright soon became one of Louis Sullivan's chief assistants.

Sullivan, who coined the much-quoted adage that "form follows function," has been described as the primary influence on Wright's thought, but Wright's ideas had already been influenced by his freethinking Unitarian relatives, all of whom venerated Emerson, Thoreau and John Ruskin. By the time Wright met Sullivan, he already subscribed to Ruskin's belief that beauty existed in order "to convey the absolute values upon which a sound society must rest." Even the term "organic"–which Wright used to describe his own work–comes directly from Ruskin. Ruskin believed that the architect had an obligation to improve society; Wright's mother drummed home the message.

Of his parents, Anna Lloyd Jones had the greater influence on Frank, not because his father lacked stature–William Carey Wright, the Harvard-educated son of a Baptist minister, became a minister himself–but because the marriage ended in divorce when Frank and his two sisters were still adolescents. Wright the elder disappeared, never to be seen again, and his mother's large family filled the gap in Frank's life.

His mother always paid his debts

Anna sustained her son selflessly but, in her zeal to help, unwittingly encouraged him to become a spendthrift. She always paid his debts, fueling his lifelong belief that someone would inevitably rescue him from the consequences of his own folly. Perhaps not surprisingly, she set a pattern for the kind of woman to whom Wright would be attracted–artistic, idealistic, unpredictable and utterly devoted to him. In short order he married Catherine Lee Tobin, always called Kitty, whom he had met at his uncle's church in Chicago. He built a house outside Chicago, in Oak Park, and the couple had one child after another–there would be six in all.

While still with Sullivan, Wright was working in a classical tradition and was on his way to becoming, as architectural historian Henry-Russell Hitchcock would write, the ablest academic designer in Chicago. Fired for moonlighting in 1893 in violation of his contract, he set up his own practice and soon began working in a totally

In the great workroom of the S. C. Johnson & Son, Inc. Administration Building in Racine, Wisconsin, Wright's slender "dendriform" columns bear weight, allowing him to flood the space with light.

new style, one that would mark his first great period as an architect. Early evidence of this radical departure came when he redesigned his own dining room in 1895 (opposite). Simplifying the decor radically, he emphasized the horizontal by means of wooden moldings, and the vertical by means of chairs of his own design with much-elongated backs composed of slats of wood. The floor was bare; the room's only concessions to decoration were some vases of flowers, leaded-glass windows with a pattern abstracted from a flower, and a carved wooden lighting grille in the ceiling.

Consistency and order, the elimination of superfluous detail, a return to natural forms, respect for materials: it sounded like the manifesto of a new order–and it was. The Arts and Crafts Movement, as it evolved in Britain in the 1880s, was a reaction against decades of mass production, and a revival of the concept of medieval guilds and beautiful handcrafted objects. The leading practitioner of the new movement was William Morris; and John Ruskin was the major theoretician.

By the time Wright and his Chicago contemporaries became enthusiasts, the English style was well developed and was being shown in international magazines

Meryle Secrest's biography Frank Lloyd Wright *was published in 1992 by Alfred A. Knopf; she has previously written four other biographies.*

Its adherents, however, espoused a set of principles rather than a style, giving Wright free rein to develop in his own direction. What he learned about unity of design would become almost an obsession, as his clients fought in vain to introduce what he considered foreign objects into his perfectly composed interiors.

Wright was often criticized for his low ceilings. In characteristic form, he confused the issue by claiming that, at 5 foot 8, he was tailoring them to suit his own height. In fact, he was a master of the theatrical manipulation of space. Since he realized that the eye cannot distinguish easily between slight differences in ceiling heights, he made them very low or very high. That sense of drama, the concept of a vast fireplace at the center of the house and the symbolic importance of the dining room were additional ideas advocated by Arts and Crafts architects. There were other important influences on his work as well, from the Froebel geometric blocks he had played with as a child to his lifelong love of Japanese art and design.

But this is not to imply that Wright was just an imitator. His great gift was his ability to transform the ideas of others and make them his own. He particularly distinguished himself in the way he integrated his "Prairie" houses with the landscapes of the American Midwest–hence the name. Stressing the horizontal with spreading roofs and bands of windows, he stretched out porches

and pergolas into the surrounding gardens so that the house and setting merged into a harmonious whole.

From 1893 to 1909 Wright's firm had an astounding 273 commissions–many of them Prairie houses. It seemed, during those busy years, that he could do no wrong. No longer the outsider, he was a hardworking, upstanding citizen of Oak Park. When not hunched over his drawing board, he took Kitty to the theater, entertained, and rode his favorite horse, Kano, through the surrounding countryside. Driving his custom-made yellow sports car through Oak Park, his long hair streaming in the breeze, he presented the image of a man who had it made.

And then, suddenly, he threw it all away. Leaving his wife and children in 1909, he ran off to Europe with Mamah Borthwick Cheney, the wife of a client. He thought he could explain this act by saying the "honest, sincere thinking man" could not be governed by the rules that bound the "ordinary man." Defying unremitting public outrage, he settled down with her in 1911 in Taliesin, the house and workshop he built near the old family homestead in Wisconsin. Three years later, his life was shattered when Borthwick, her two children and four others were murdered by a crazed servant, who also set fire to the complex. The house at Taliesin burned to the ground. Only his studio survived.

During these difficult years, as his personal life disintegrated, his professional career began unraveling as well. In this country, the Arts and Crafts Movement gave way to a revival of the Colonial house, the new symbol of genteel culture. Internationally, the field of architecture was in ferment as influential Europeans such as Le Corbusier, Walter Gropius and Ludwig Mies van der Rohe ushered in a new era. The Machine Age had arrived, confounding all the old values. The emphasis was still upon society, but it had shifted; now, instead of symbolizing national aspiration, buildings had to meet the goals of progress and social betterment for the masses. The notion that beauty existed to convey a society's absolute values had been thrown out, but Wright, to his detriment, was still wedded to it.

Wright rose to these challenges, as he would to bankruptcy, lawsuits and innumerable nuisance suits by his vengeful second wife, Miriam Noel, whom he met shortly after the tragedy at Taliesin. He wouldn't find lasting happiness until 1928, when he married Olgivanna Hinzenberg, his partner for the remaining 31 years of his life. He survived flagging commissions after the completion of his famous Imperial Hotel in Tokyo (1923) and the ignominy of being considered, as noted architect Philip Johnson once quipped, "the greatest architect of the *19th* century," with his best work behind him.

Through these years, Wright kept his courage up to "fighting pitch"; as he told his son Lloyd, "there is probably something coming before they shove your old man under." That was written in 1930; later in that same decade he would design Fallingwater in Fayette County, Pennsylvania–perhaps the greatest house of the 20th century (see cover)–and the S. C. Johnson Administration Building in Racine. These two commissions reestablished him as a major figure in American architecture.

Are Wright's buildings so impractical? Opinion is divided on that score. William Cronon, writing in the catalog for the MOMA exhibition, made Wright's leaking roofs something of a metaphor for all that was contradictory and unsatisfying about him as an architect. However, since Wright was hardly the only one designing flat roofs in the 1930s (a few others, such as Marcel Breuer, Walter Gropius and Richard Neutra, come to mind), it hardly seems fair to single him out for censure.

Daring designs, unorthodox drafting techniques

Jonathan Lipman, a partner in Prairie Architects, which is restoring Wright buildings, says that the cost of restoring these structures has been no greater than for any other historic buildings. Lipman does concede that since Wright tended to do daring things with his designs (e.g., extending roofs out to their utmost limit) some sagging is to be expected nowadays. But he denies that Wright's blueprints are hard to read, as is also claimed. Rather, he points out, Wright used unorthodox drafting techniques that his contractors could not always understand, giving rise to unnecessary problems.

There are equally convincing arguments attesting to the virtues of his buildings, particularly those of the Prairie houses. These were surprisingly warm in winter and cool in summer, thanks to Wright's attention to roof overhangs and the care he took with sources of heat and light. Yet all sides agree that Wright was primarily an esthete: his sister Maginel once found him sitting in the bathroom of his suite at the Plaza Hotel in New York, not yet redecorated to his specifications, because, he said, he could not bear the decor. The debate will probably never be settled.

Unfortunately, visitors to the MOMA exhibition will not be able to see an actual full-scale model house (something Wright provided in one of his own major exhibitions), which seems a pity. A model would help to convey a sense of Wright's masterful manipulation of space. For Washington architect Hugh Newell Jacobsen,

Wright's search for harmony of building and setting links all his works; from the top, the Meyer May house in Grand Rapids, Michigan (1909), a Prairie house; Taliesin West in Arizona, which hugs the desert like a free-form tent; and the Annunciation Greek Orthodox Church in Wauwatosa, Wisconsin, a late work (1959).

to enter one of Wright's buildings is to embark on a voyage of exploration. "His spatial gifts were miraculous–his dramatic shifts in ceiling heights, his hidden entrances, the gift he had for making a little teeny house look five times bigger than it was," says Jacobsen. "These were great architectural tricks, and so many of us have been influenced by him, one way or another."

E. Fay Jones, the Arkansas architect who won the American Institute of Architects' Gold Medal in 1990 (SMITHSONIAN, August 1991), decided to become an architect after seeing a film about one of Wright's buildings for the S. C. Johnson & Son company. "I had to struggle not to be an imitator but to understand his principles," says Jones. Wright's sensitive response to nature and the care he took to place his buildings harmoniously on their sites, his respect for the nature of materials, and the underlying unity of his designs became Jones' lifelong goals. "Those principles are as relevant today as they were a hundred years ago," he observes.

The Balzacian scale of Wright's life and the quixotic battles fought, the "stern chase" in which he was involved, as he termed it, tested his resolve to the utmost. At one time it was fashionable to think that Wright designed nothing of value between his great Japanese work–the Imperial Hotel, which was finished in 1923–and Fallingwater in the mid-1930s. This view no longer holds, and the MOMA exhibition will place some emphasis on the works of those forgotten years when his interest moved, for the most part, from the verdant hills of Wisconsin to the West Coast. There, Wright turned for inspiration to ancient Mayan ruins, designing templelike buildings of monumental power, such as Hollyhock House in Los Angeles. In later years Wright spent his winters on the outskirts of Scottsdale, Arizona, where he had acquired 800 acres in the desert and erected what he thought of at first as a modest camp. Taliesin West, with its slanting walls of stone and concrete, its redwood trusses and canvas roofs (later replaced with translucent white plastic), is now considered one of the inspired designs of his second golden age and is the center for his famous archive.

A love-hate relationship with MOMA

It is ironic that the museum that is now paying Wright its ultimate compliment should have helped convince him, during his years of obscurity, that he was being cold-shouldered by his profession. When MOMA presented its first exhibition of modern architecture in 1932, featuring the International Style it fervently admired, Wright was included, not because he was part of that movement but as precursor of a style that better men had brought to triumphant fulfillment. The slight rankled for years. There was always a "love-hate relationship," despite the fact that MOMA made handsome amends in later years, says Bruce Brooks Pfeiffer, curator of the Wright archives. Having felt himself to be an outsider, Wright was perhaps too easily bruised. He tended to compensate by making famously outrageous statements, such as: "Early in life I had to choose between honest arrogance and hypocritical humility. I chose honest arrogance." One never knew the exact tone of voice used, but one guesses there was some self-mockery involved. Once, in court, he referred to himself as the world's greatest architect; when challenged about it, he said, "Well, I was under oath, wasn't I?"

What is missing from many descriptions of Wright is his personal charm, for which there are endless testimonials. (Often finding it hard to voice his anger, he expressed it in impulsive letters, full of exclamation points, which he later regretted.) His saving grace was a robust sense of humor. ("Doctors bury their mistakes; architects have to cover them with vines.") As his grandson Eric Wright once said, "After a horrible outburst he'd make some sort of witty comment and you'd have to laugh." He was, in the main, a happy extrovert, tireless, generous to a fault, and one who inspired enduring loyalty in those who came as apprentices and architects to Taliesin during the last 20 years of his life.

As many detractors as admirers

Wright's "second golden age" never came to an end. His final major work, a building for the display of Solomon R. Guggenheim's sophisticated collection of modern art, took years of thought. Guggenheim had bought the perfect site on New York City's Fifth Avenue, and perhaps for that reason Wright felt he had to design something as conspicuous as possible. For years he had been experimenting with the helix, and for the Guggenheim he envisioned the spiral form as an interior ramp that would allow for a continuous display of the museum's collection. Not only exceedingly difficult to build, the ramp's wall curved too sharply to accommodate larger paintings. People began to suspect he did not like art. The situation was not helped by Wright's fondness for walking through the collection, twirling his cane and asking, "What do you call this stuff?" Since the Guggenheim opened, it has had detractors as well as admirers. "The debate will undoubtedly continue whether the Guggenheim is good or bad as a museum," says MOMA's Terence Riley. "What is undeniable is its sublime character–as a form and as a space."

Wright had learned, as he told well-wishers on his 80th birthday, the secret of longevity: "a creative life is a young life." He had survived it all and triumphed. Six months before he died, in 1959, he was standing amid the scaffolding of the museum, wearing his characteristic broad-brimmed hat, his scarf flying around him–on top of the world.

A triumph of organic form, the Guggenheim Museum was created by Wright (at right, supervising work on it in 1957, two years before his death) around the concept of a spiral ramp; 1944 drawing (below) by Wright apprentice Peter Berndtson is in the MOMA show.

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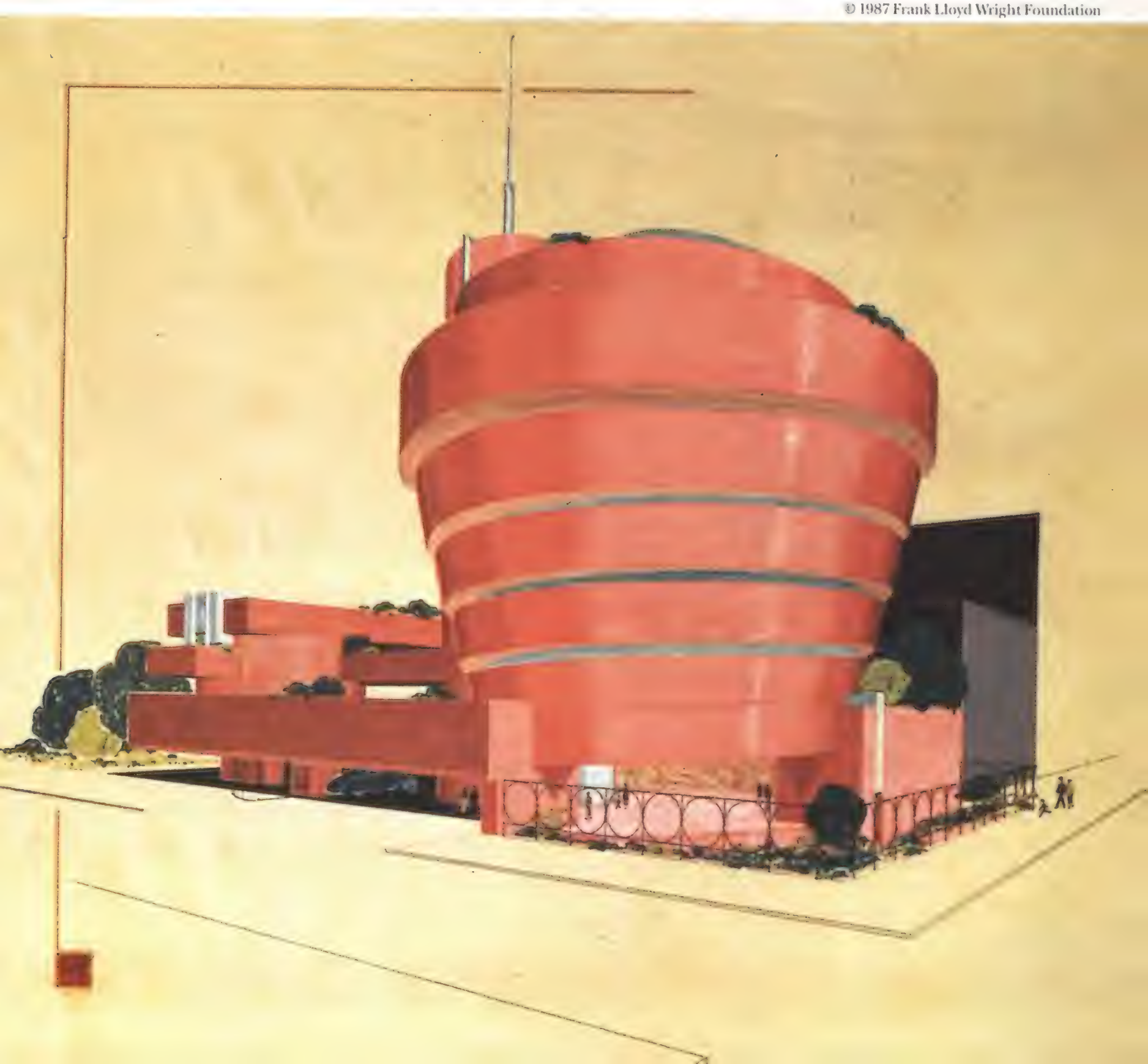

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VILA
PERDONEN LAS MOLESTIAS

By Simon Winchester

The long, sweet road to Santiago de Compostela

Seeking the tomb of Spain's patron saint, pilgrims are overwhelmed by kindliness and the beauties of a splendid countryside

Uffizi Gallery, Florence

Albrecht Dürer's version (1516) presents Saint James adorned with his traditional scallop-shell symbol.

The crooked main street of the village of La Virgen del Camino, in the dry Spanish flatlands of Castile, looks at first sight much like any other. The houses on either side are small and white-painted, with walls of adobe and roofs of thatch; old ladies in black rest in their doorways, just out of the blinding sun; a sleeping dog yawns and stirs up a small cloud of red dust as he stretches. From the bypass there is a low rumble as the cars and trucks grind past on their way to and from the ports of Galicia; in the village itself, drenched in the sunshine of late summer, all is a quiet lassitude.

But then, briefly interrupting the studied somnolence of the place, an unfamiliar figure appears. It is a woman, and she walks up the shaded side of the road with a stride that speaks more of determination than pleasure. She is middle-aged, and when she comes closer you see that she has a lined and weatherbeaten face, but with a kindly, peaceful expression. She is wearing hiking trousers, heavy boots and a light anorak; she has a squashed drover's hat on her head, a rucksack on her back and a stout walking staff in her right hand. She is also wearing, like a talisman, a seashell around her neck–the kind of flat scallop shell that diners would recognize as the underpinnings of a coquille St. Jacques.

She is perspiring and stops at a fork in the road to mop her forehead with a grubby kerchief. She switches off a Walkman buried in a side pocket and removes the earpieces. In the sudden silence she looks about for where to go next.

One of the village housewives lumbers out from the shadows and waves her a greeting. "*Ah, buenos días!*" the walker exclaims in a Spanish that is decidedly proper and formal. Then, looking somewhat puzzled by the two roads ahead, she plucks up courage and asks "*Disculpe–en que dirección está el camino?*" The woman in black jabs a stubby finger toward the lane heading off to the right, then asks, "*Usted es peregrina?*" and laughs and reaches into her house for a pitcher of ice water. "*Agua fría?*"

Ten or twenty times a day this contented old lady gives directions to such travelers as she sees heading westward through her village–always with more determination than pleasure. Most of them, like this woman in the drover's hat (she is a native of Liverpool) are on foot; a number are on bicycles; a few–half a dozen on this hot late-summer's day–are on horses. Again on this day a couple of men in hessian cassocks come past leading an uncomplaining donkey that is making their life much easier by carrying their packs–to this lazy pair, the old lady joked, she almost didn't make her customary offering of cold water.

But all who pass through have her respect and her blessings. For they are members of an immense confraternity whose passage along these streets helps to make La Virgen del Camino a most unusual village, compared with the others in this hot and dusty region of

At journey's end, three pilgrims from Seville take a stand before cathedral at Santiago de Compostela.

Photographs by Christopher Cormack

Pilgrims from the New World include Megan Karlin from Santa Barbara (above) and two brothers, Arturo and Eduardo López Corella, from Baja California.

northern Spain. There are men and women, mostly young but some very elderly indeed, who brave the heat and the flies and the blisters and the sunburn for a common purpose, and a purpose for which all wear the common badge of the scallop shell.

It is the scallop shell–symbol of Saint James–that gives the necessary clue. All of these walkers and riders and bicyclists and donkey-drovers–70,000 of them last year alone–are passing through this and a hundred or more other northern Spanish villages on a pilgrimage, *la peregrinación*. Their goal is the supposed tomb of and shrine to Saint James, the patron saint of Spain and the man who is perhaps the most important–certainly the most senior–of all the martyred disciple-saints of the Roman Catholic Church.

Those passing through this particular small village are bound for a town that still lies 200 miles and two weeks of determined striding away, over the wide and sandy plains of the León region and the low granite mountains of Galicia. Those who began at the Spanish frontier will have already walked 300 miles to get here: the entire route in Spain is more than 500 miles long; from northern France, where it more properly begins, twice as long again. All are bound for one of the holiest cathedrals in the world, that of Santiago–Saint James–in Compostela.

That is where the camino ends, and where one of the world's oldest and most regularly performed Christian pilgrimages terminates. It is a phenomenon that draws the devout and the determined from all over Europe, and from a few places beyond. It draws them today as it has drawn them in their millions for more than a thousand years, along a route that is more or less unchanging, a comfortable morsel of devotional tradition in the midst of the secular hubbub of modern progress.

What lures them all is a complicated mix of myth and legend, one that is seasoned with a very few facts and a great many fairy tales. Of the facts, those that concern Saint James' venerable stature are alone in being wellnigh indisputable. James was the son of Zebedee and Salome (the former being a fisherman of Galilee, the latter, the sister of the Virgin Mary and thus a figure who in more conventional families would be Christ's aunt, making James and Jesus cousins). Once converted, James

Biking pilgrims in front of Léon's cathedral have lately crossed Puente la Reina bridge (left) near Pamplona.

and his brother John turned out to be men of such remarkable zealotry that a grateful Christ gave them the surname Boanerges, the Sons of Thunder. Some say James was present at the Crucifixion. A short while later, still preaching and converting with undiminished enthusiasm, he was arrested and beheaded on the orders of King Herod Agrippa I, thereby becoming the first of the Twelve Apostles to suffer martyrdom.

But, considering that this execution almost certainly took place in Jerusalem, why did his sepulchral headquarters turn out to be in Spain? And why, in all of Spain, in a place that must then have been a mere hamlet near the Atlantic headlands of Finisterre, at what was then considered to be literally the end of the Earth?

The mythology is seductive, even if it fails to convince the more rigorous of modern theologians. It is a story with four essential parts, each part as credible as the others. The folk myth that James went to Spain to preach, for instance, is accepted by those enthusiasts who believe also that Saint Thomas went to India, Saint Matthew to Ethiopia and Saint Bartholomew to Armenia; there is barely a shred of documentary evidence to support it and only the vaguest hint of it in a line in the Book of Acts. But in much the same way that Kashmiri Christians will tell you that Christ died in Srinagar, so Spaniards believe that James preached among their forebears; it has become, in Iberia, part of Holy Writ.

Then again, there is the suggestion that after his execution James was disinterred, that his head was somehow reattached and the whole body was carried in a ship (built of stone, no less) from the port of Jaffa to what is now the Galician harbor of Padrón. It was then reinterred in an old Roman burial ground a few leagues inland. This is a tale that finds supporters too–certainly enough of them in Spain to keep a somewhat improbable legend alive.

The story then assumes a third, geopolitical, aspect. Shortly before he died early in the ninth century, Emperor Charlemagne reportedly had a dream involving a star-studded road that led across France and Spain to

The author, who roves the world and writes about it, has a new book called The Anatomy of Restlessness. *He last wrote on Magellan (*SMITHSONIAN, *April 1991).*

Mountain bikes packed with gear, two young Spanish pilgrims lay out a fine, high-tech, alfresco lunch.

Boys and girls together sample cots in a dormitory that regularly accommodates pilgrims at low prices.

this as yet undiscovered tomb of Saint James. God, in this dream, urged the emperor to free the road from the terrible embrace of the Moors who then occupied that part of Iberia. Charlemagne promptly did as he was bidden, taking his armies across the Pyrenees and waging a campaign that ultimately–and in the name of Saint James, whose banner, adorned with the mysteriously appropriated symbol of the scallop shell, he flew–rid the regions of Castile and León, Galicia, Navarre and La Rioja of the scourge of the Saracens. He freed the country for those who might one day wish to walk to a grave that had never been found, of a saint whose body might well still have been in or near Jerusalem.

It was left to an otherwise unsung Galician hermit named Pelagius to complete the cycle. Normally Pelagius lived an uncomplicated life, praying and meditating and foraging for grasses and honey in the low green hills by his cave. But on a day in A.D. 812 (or 814–there is a small chronological dispute) he witnessed a bright star hovering over an empty field nearby. He reported the phenomenon to his religious superiors and won their authorization to dig at the suggested spot. He eventually found a perfumed body, well preserved and with its head attached. There was a note on the bier attesting–inevitably, sceptics will say–to the body's authenticity: it was that of "Santiago, son of Zebedee and Salome, brother of John, whom Herod beheaded in Jerusalem. . . ."

To students of the pilgrimage industry–which in the Middle Ages became almost as well developed as package tourism is today–this discovery (which, in order to win pilgrimage-site status, was officially reported to the pope by the Galician head of state, King Alfonso II of the Asturias) is a classic. It is part of the so-called *inventio* phase, which the Vatican defines as the finding of a tomb or relics in the wake of a miraculous revelation. Revelations with comparable results also took place at Lourdes, at Fátima and at a number of other, lesser sites of eventual pilgrimages.

Jacobus, Iago, Jacùme, Jaime, Diego, Jacques

This first phase was then followed here by a second, the so-called *translatio*, in which the relics were removed on the orders of Rome to some suitably grand site nearby. In the case of Saint James (who is variously and confusingly also known as Jacobus, Iago, Jacùme, Jaime, Diego, Jacques and by the sacred lexical conflation of Santiago) the bones went into the crypt of a chapel built for the purpose at Campus Stellea, the field where the star shone. And from that dramatic beginning, via the work of scores of celebrated medieval architects, rose today's cathedral, the magnet for one of the best-organized pilgrimages in the Christian firmament.

All poppycock! the sceptics cry. The name "Compostela," to start with, has nothing so romantic as stars

Carrying telltale staff, a redheaded pilgrim gets directions and a cup of water from Maria Orsia in the tiny village of Gonzar. Country folk along the route regularly offer free food and places to sleep.

about it but, rather, stems from the same etymological root as gave gardeners the distinctly more prosaic word "compost." And as for his being buried in this field–it is more likely that the slight similarities between the Latin words for Jerusalem and Spain–*Hierosolyma* and *Hispania*–led some myopic monk to mistranslate and get the site of James' plot wrong by a full 2,000 miles.

And as for the scallop shell ever having been a symbol of the Christians who fought the Moors, the more widely accepted explanation these days is also the more lubricious: that the scallop shell was a symbol of the goddess Venus and that it was the membership badge of an informal cult of woad-covered sexual gymnasts who once held orgies among the mystic forests of standing stones that dot the countries of Europe's Celtic fringe.

As to which you choose to believe–you pays your money and you takes your choice. Or, rather, you don't pay your money–for until very recently it has been understood that those who do undertake the pilgrimage to Santiago do so at very little cost. Rooms en route are given out free to pilgrims; simple but nourishing food is offered to them gratis as a gesture likely to win eventual Divine approval for the donor; and there is always a glass of cold water or a restorative *vino tinto del país* or even a simple pat on the back for a passing traveler, gestures that will doubtless be similarly looked upon kindly when the day of reckoning comes.

Which is why, above all, so many thousands of people still do take part in the Compostela pilgrimage. The spiritual pull is there, of course: more than half who are questioned by church officials say they walk for "religious reasons." The keen desire to stroll through some of the loveliest landscape in the world is an ever-present motive, too. And the chance to see, and even to rest among, some of the grandest and oldest architecture in Europe is tempting. But the pilgrims of today are unanimous also in finding the deepest of pleasure in one aspect that is measured on a more human scale: it allows them each to experience the simple kindness of their fellows–a kindness and a caring that, one might think, has almost vanished from the modern world.

The Englishwoman in La Virgen del Camino was a case in point. She was called Dorothy King and she was neither a Catholic nor, by her own account, a person of a particularly religious mien. "But," she puffed as we walked up a hill together, "I felt that spending a month or so walking through Spain for such an obviously good and uncomplicated reason as this, could do nothing but good for me. It would be healthy. It would put me in touch with ordinary Spanish people. And it might even put me in touch with myself. I'd be testing myself, thinking about things, getting to know my limits–all the kinds of things we British don't normally like to talk about."

And had it fulfilled its promise thus far? "No doubt at all," she said. "Not a shred of doubt. Oh, I get bloody

Pilgrims' way across northern Spain leads past great forts and palaces, and past many beautiful villages like Cirauqui, in the rolling Pyrenees' foothills.

sore feet. I know the cyclists get terrible pains around their kidneys, for some reason. And today I'm a bit fed up because some magnets I bought in hopes they would give me energy seem to have mucked up the strip on my Visa card, so I had some problems in the hotel. But otherwise this is just wonderful. I get to think about things. Saint James would have approved, I'm sure.

"And the people! I've never known such kindness, and such simple goodness. They see the shell on the string, they sing out '*peregrina!*' and there's everything you might ever want, just for the taking. You'd think they'd get sick of us–there must be hundreds doing the walk. Perhaps they feel they get blessed for helping. Or maybe they're just incredibly nice people."

Dorothy King was walking about 20 miles a day–the cyclists make rather more progress, the horses and the donkeys about the same–and she spent most of her nights in dormitories in one of the official *albergues*, where monks usually played host in their monasteries and abbeys. (On the night that had been slightly spoiled by the vagaries of ferromagnetism she was splurging in the great 15th-century Hotel San Marcos in León, an interruption of the ascetic regimen in which the many pilgrims who can afford it happily indulge.) She had been on the road for two weeks so far; she had another two to go, give or take a couple of days; she was hoping the weather would grow cooler and that her left boot (from which she had blisters) would become less constricting.

The Way of St. James has been from its inception mainly a French road (though most of the non-Spanish pilgrims you find on it today are actually German). Officially it begins in Paris, at the little Tours St. Jacques near Notre Dame. A thousand years ago–when luminaries like John of Gaunt, Chaucer's egregious Wife of Bath and later Saint Francis of Assisi, Louis VII of France and King James III of Scotland paid their liturgical dues by taking part–the tower would have seen the gathering each day of a great scrum of riders and walkers. Each would have the four essentials–a sturdy staff, a large hat, a gourd for drinking water, and a scallop shell. And all would be caught up in the heady mood of anticipation that Sir Walter Raleigh was later to note: "Give me my scallop-shell of quiet / My staff of faith to walk upon / My scrip of joy, immortal diet, / My bottle of salvation, / My gown of glory hope's true gage, / And thus I'll take my pilgrimage."

The road, though it was undoubtedly first inspired by a firm belief in salvation and in certainty of the spiritual power of whatever lay in the reliquary at Compostela, soon ceased being the monopoly of the pious. Those who joined up in Paris in the early days, in the 10th century, may well have been representatives of the great and the good; by the 12th, however, they were a gallimaufry to which the Hogarth of *The Rake's Progress* himself could well have been court artist.

In the Middle Ages all manner of scoundrels and vagabonds tended to join up with the monks and the cardinals and the devout laymen, with the penitential and the sickly, with the knights who had vowed to make the pilgrimage if they survived in war, and with those early tourists who just wanted a chance for an excursion to the seafood restaurants of the bays between San Sebastián and La Coruña. The French courts, for instance, often sentenced ne'er-do-wells to a choice of "imprisonment or pilgrimage," and the road could be clogged with thieves and murderers all looking for those enterprising fellows who would sell them a forged "Com-

Lincoln
called them the
mystic chords
of memory.
Those
delicate strands
that connect us all;
one to another.
They make
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Performing pilgrim's ritual, Mario Gomez of Grenada kisses ornate statue of saint in Santiago cathedral.

postela"–a certificate proving their successful participation in the pilgrimage–so they could return to court a few months hence and win their liberty.

On the one hand, there were merchants and weavers and potters who used the road as a marketplace; on the other, there were forgers and robbers who preyed on the unsuspecting walkers. And there were notorious women of the road–some of them incorrigible, others converted by the wayside. "*Ir romera y volver ramera*," they used to say, when the reputation of the pilgrimage was at its lowest. "Go a pilgrim–return a whore."

Today the Way of St. James is more eminently benign, tinged with commercialism maybe, but to most walkers' knowledge, rarely visited by crime or unseemliness. Those few who come down from Paris, or from the other official French starting points at Vézelay, Le Puy or Arles, find it a mixture of the idyllic and the back-breaking. In France–and on those trails that begin in Europe's other great Catholic states, like Portugal, Ireland, Switzerland and Germany–the trails are lonely places, overgrown and little-organized. But when the four paths cross the frontier and meet by the little six-arched bridge at Puente la Reina, near the bull-running town of Pamplona, the numbers of pilgrims begin to swell noticeably, the popularity of the venture becomes clear, the route becomes clearly marked and formally established as a byway of the continent.

Bureaucrats in Brussels and Madrid have cooperated recently to ensure that the 1,100-year-old route now has formal status, a Cultural Route of Europe, no less, and smart new blue-and-yellow signs–properly adorned with scallop shells–show precisely where the lanes snake in and around the villages and over the hills of Spain. Someone has also come up with the idea for a logo, a stylized walking staff and gourd, and it can be seen stenciled on the side of most Iberia jumbo jets these days. And a Galician with an apparently perverse streak has even designed a grotesque little plastic figurine that looks like a Donald Duck designed by Miró; it is named Pelegrin, and the horrid thing, well-intentioned no doubt, is made "so that Galicia may show its modern face to the outside world."

Those who make the pilgrimage on their mountain bikes of carbon fiber and titanium may have a modern attitude toward their pilgrimage; but most others, as they stride alone through the trees and over the mountains, seem to take infinitely more pleasure in the simple antiquity of their quest. True, there are miles and miles–particularly in the easternmost regions of Spain–where the road is no more than the sidewalk along a busy highway choked with traffic and fumes. But then a sign will show that the original route plunges down a leafy, rutted lane, and you take it and within moments are enveloped by the sweetest silence and peace.

Then there is only the pleasing rhythm of your staff hitting the ground in front of you with pendulum regularity; the steady clump of your boots on the leaves or dark earth or grass; the rhythm of your breathing; and the ever-present birdsong. And it is in moments like this that you begin to think, and think–and all the labors of the walk seem to vanish, and distance seems to shrink, and the road seems to unroll before you almost magically, mile after mile, village after village, from one halting place to the next.

Bunks for two dollars a night–at most

At the end of the day, if you've calculated your pace correctly and have not dallied to gossip with those who step out to offer ice water or wine or cigarettes, there will be a place to stay the night. Some of the albergues are very plain, where a hundred of your footsore fellows may share a barnlike room with you; a very few places will charge you for the night, $2 at the most; some–like the Baroque monastery at Samos, where elderly monks sing Gregorian chants as they have on this site since the eighth century–are quite unforgettably lovely.

And each day, indeed, there will be some sight, some encounter, that is refreshing to the human spirit: all pilgrims report the same, and have for centuries; something almost miraculous makes the pilgrimage much more of an event than the simple achievement of a very long walk might suggest.

When the dry plains of Castile have given way to the almost Welsh-looking green enfoldments of Galicia, the pilgrimage reaches its goal. The approaches to Santiago de Compostela are unprepossessing–the camino skulks along for what seems miles below rows of the ugly modern buildings. Even your first glimpses of the twin spires of the cathedral do not make it look, from a distance, half as impressive as some already seen–not as splendid

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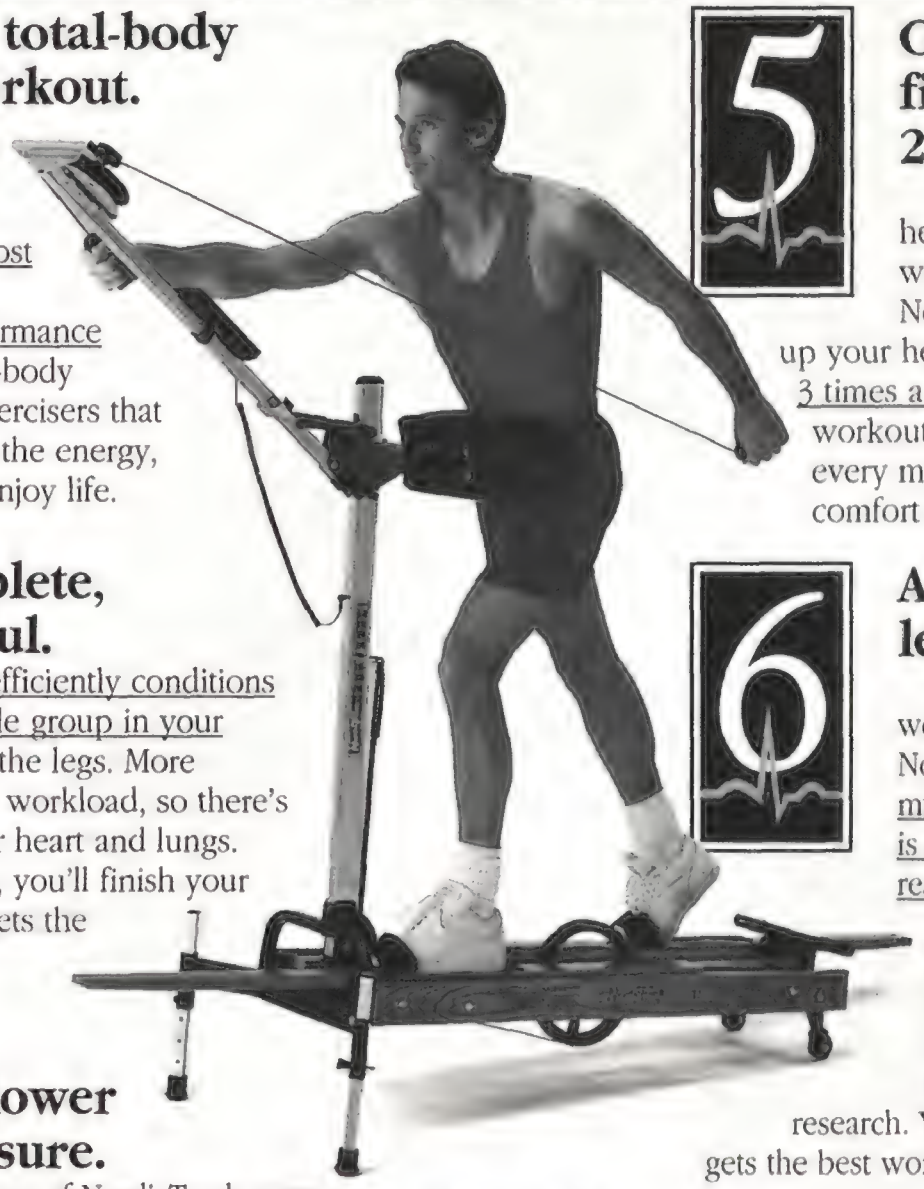

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as the Templars' castle in Ponferrada, for example, or the huge old monastery at Suso, or even as pleasant as the little church of Santa Maria la Redonda, 300 miles back at the border town of Logroño.

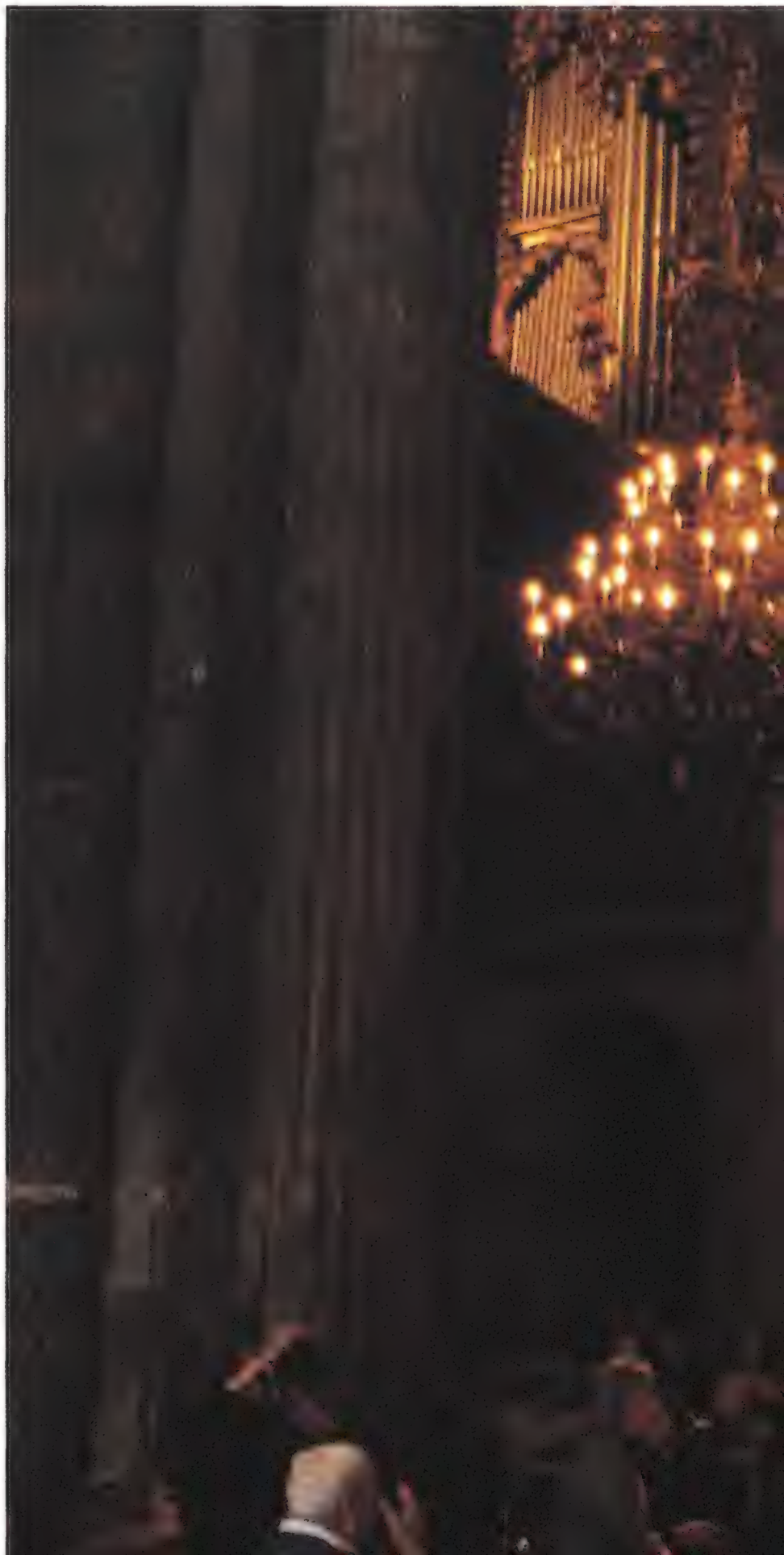
But then the modern asphalt gives way to the uneven and well-worn paving stones and cobbles of the city. The streets narrow, and you find yourself walking through the shadows of the old overhanging eaves. As you do so, the atmosphere steadily changes, and your spirits lift again. And at last, you turn a corner beneath a lantern, and there in front of you is the huge Obradoiro Square, vast and empty but for a surge of young men and women with sticks, who wait at the steps of the cathedral itself to enter through the Baroque extravagance of the great west side.

Officially the walkers and riders should first call at the Pilgrim Office to signify the completion of their task. Those three flights of stairs up to the priestly registrars must be the cruelest climb of all. Inside, slumped on sofas and in an atmosphere thick with sweat and liniment, are dozens of men and women wearily handing in their stamped *certificaciones de paso* that show from where they have come and how many days they have been on the road. So long as they can show proof of having walked or been on horseback for at least 60 miles, or having cycled for at least 120, they are formally given the status of pilgrims. Each is given a handshake by the Secretary of the Pilgrimage, and a certificate adorned with the local bishop's seal–and a scallop shell–to display forevermore.

There remain three final duties. At 5 o'clock each evening, in the dark of the cathedral, that day's pilgrims will gather for a formal service of thanksgiving. Doubtless they will gaze in awe up at the huge and gaudy complexity of the main altar, with its three images of Saint James–as master, knight and pilgrim–and at the statues that represent Prudence, Justice, Strength and Moderation. No doubt the choir will astonish them, and the lanterns and the pulpits and the vast acreages of gold and gilt and glitter will dazzle them.

But most say later that they find the ritual involving the *botafumeiro* the most memorable aspect of all. This three-foot-tall contraption made of silver-plated iron, filled with glowing coals and fresh incense powder, is suspended by a thick hemp rope from the highest point of the cathedral and heaved into position a few feet above the congregation's heads by a team of five burly Galician fishermen. The men set it swinging–slowly at first, but soon furiously, sending it arcing back and forth through the air, until it whistles with its speed, pausing at the top of its climb before hurtling back down, drenching the nave with sweet-smelling smoke. So huge a cargo with such velocity and power looks terrifying–and it did fall once in 1622 when the men lost their grip, though mercifully no one was hurt.

Once the praying is done, the congregation of pilgrims lines up behind the altar and squeezes up a narrow stone stairway to a small step that rises just behind the shoulders of the central effigy of Saint James the Pilgrim. One at a time they clasp his shoulders and kiss the lip-polished scallop shell that lies in the center of his back, all of them giving thanks for his having inspired



At mass, giant *botafumeiro*–literally "smoke thrower"–swings over worshippers, filling the nave with incense.

them to finish a journey of the soul, and of the spirit.

Then, finally, below the altar, the pilgrims pause one at a time before the reliquary that holds the bones. As you kneel before it–who then is really concerned with the true origins of this small ossuary?–you suspend disbelief for a moment. You pray–most people do, for if not, why have they come?–and you keep silent for as many seconds as seems prudent. And then you stand, limp up the final steps, turn right into the nave and walk out into the blazing evening light of Obradoiro Square.

Clerks at the railway station at Santiago de Compostela, and at the airport nearby, say they believe they sell more one-way tickets than at any other place in Europe. Long lines of weary travelers ride and fly out every day, all vowing not to walk another step–at least for another year. Dorothy King was flying to Liverpool, and lots of those young men and women who had walked from Paris and San Sebastián and Barcelona were taking the night trains out. The six men on horses were puzzling how best to get their animals to Madrid. The pair in their hessian cassocks had put their redoubtable old donkey up for sale. They would be perfectly content, they said, as long as the sale of the beast paid the price of their tickets home.

FORD DESIGNERS FROM LEFT TO RIGHT:
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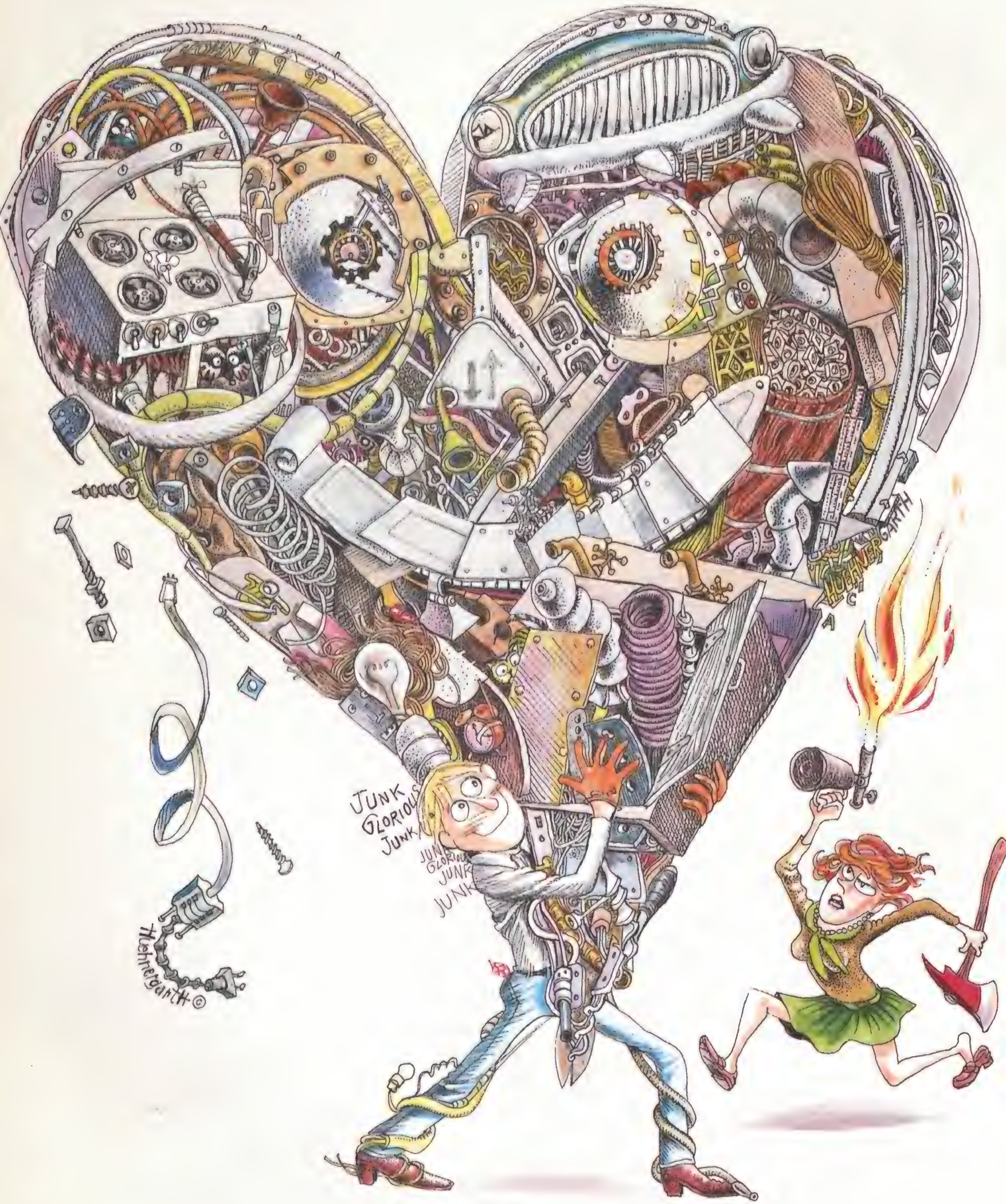
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By John Neary

To the junk hound, life is one treasure hunt after another

Why does a sane man risk his wife's ire with tons of waste? Because he loves it, that's why. Occasionally he even finds a use for it

Walking down our dirt road the other night, I found a lovely 12-inch-diameter barrel clamp that had bounced out of the bed of somebody's pickup truck, one of those light steel hoops with the locking snap that secures the lid on a metal drum. I carried it home, naturally, and put it out back, along with all the other barrel clamps of various sizes that have come my way.

Why do I want to clutter up my life and my yard with old barrel clamps? Because I know, after living out here in rural New Mexico for 20 years now, that someday I will urgently need a 12-inch barrel clamp. And if I don't keep this one, then during that future crisis of need, it will take me several days simply to locate a purveyor of barrel clamps who will sell retail to the general public. And he will not have a 12-incher in stock and will have to order it. And since his jobber requires a minimum $50 order, my urgently needed barrel clamp won't even get ordered for weeks unless I pay the $10 special-order fee. The purveyor will not tell me that, of course, until a month or so goes by and I inquire as to why my order is taking so long. And then, after I fork over the ten bucks, another week or so will go by and word will come back that the jobber doesn't have any 12-inch clamps in stock just now, and it is on back order. Or that the manufacturer has discontinued 12-inch barrel clamps. Either of which means it will never come. I have lived through this so many times that when some bit of possibly useful jetsam comes my way, I keep it. Life is easier that way.

"I believe most of us are driven by the conviction that junk is, in and of itself, beautiful for its own sake."

As a result, just to the north and east of my new shop, I have amassed, to my wife Joan's vast dismay, perhaps several thousand pounds of metal scrap. Among the more notable, more conspicuous pieces: half-cylinders from an old 300-gallon water tank, a few hefty lengths of I beam, 50 yards or so of steel cable, the hood from some behemoth of an ancient Detroit dreadnought, and a steel bucket more than six feet long.

But that's just the tip of my junkberg. There are several hundred board feet of good fir, pine and spruce lumber given me by a neighbor. Nearby there is a set of wheelchair wheels on their axle but without the chair, several cast-iron heating and cooking stoves, a pair of stove bases with majestic curved cast-iron legs (neither of which fits any of the stoves currently on hand), some nice old oak whisky barrels and a dozen or so hubcaps.

There's more. Down behind my old shop is another several thousand pounds of junk steel belonging to me–yards and yards of pipe, busted truck and car springs, torsion bars, old shock absorbers, enough railroad track to fix a major derailment, and lots of pieces of steel plate from the old Santa Fe jail. (I cut out the best graffiti and keep them indoors.) Out in front of the shop, leaning against another cookstove I salvaged from the Tesuque landfill, lies another half-ton of oxidizing iron–but that all belongs to a friend.

Inside my new shop is the really good stuff, the threaded rods and the pieces of sheet and rod brass, and the tools, somewhat disabled, in need of a good cleaning and oiling and a light overhaul. That shadowy hulk, for example, lying over there against the wall, on the far side of the old water heater turned woodstove that actually serves to heat the place, is nothing less than a Champion post drill nearly a century old. Not long ago it was headed for meltdown as scrap steel, sold for a penny a pound at the recycling center by its previous owner who thought it looked like some old piece of junk. Indeed it does, but I love it dearly, just the same.

Getting the jump on Jim

To get the drill, all I had to do was fork over a measly $40–that is, after I managed to get to Capital Scrap in Santa Fe ahead of Jim Thomas, who learned of it at the same time I did because he happened to be standing within earshot of the person who told me about it. Jim had an appointment somewhere else, so I hustled right into town, snagged the drill and stashed it in the shop–not far, come to think of it (blush), from the three other post drills I already had. It was around this time that Joan announced I was no longer allowed to go unaccompanied with sacks of our aluminum, glass, paper

Illustrations by John Huehnergarth

and cardboard recyclables and my checkbook to Cap Scrap, as we amateur junk aficionados call it.

I know this sounds like a serious case of over-acquisitional cathexis or some such malady, but I tell Joan I'm nowhere near the epic danger zone that was demarcated a half-century ago by two zealots who gave their lives to the love for junk, with which they have become synonymous. The Collyer brothers, Homer and Langley, somehow managed to stuff their three-story Manhattan townhouse so solidly with junk that when the cops, suspecting there was a body inside, chopped through the front door, they found further progress impeded by a barricade of stacked newspapers that seemed to fill most of the downstairs. Entering through a second-floor window, the astounded police found a macabre three-dimensional junk collage that totally filled the entire house, an impacted assemblage consisting in part of several thousand books, old toys, the dismantled components of a Ford Model T and, among the rest of the stuff the Collyer boys had picked up and dragged home over the years, no fewer than 14 pianos. And, oh yes, there the police also found the bodies of Homer Collyer, nestled in a kind of hideaway in the debris, and his brother Langley, crushed under a pile of newspapers that had toppled over onto him.

"Among the stuff the Collyer boys had dragged home over the years were no fewer than 14 pianos."

Rather than emulating the Collyer boys–although I can readily see the logic that with 14 pianos, at least one might be in tune–I like to think of myself as nearer to the spirit of the contemporary poet Donald Hall's image of a man who kept in his attic a box labeled "String too short to be saved." Those wee little pieces of valuable twine were not being kept out of some slavish compulsion, that label declared, but were on handy standby against the day they'd turn out to be just the right length for some fastening job. Hall used the winsome label as the title for a book he wrote that defines beautifully the way of life that can grow up around such an impulse, which I recognize as the very same one that fetches home all those bits of baling wire I pick up here and there in my travels and hang from nails on my shop walls and from tree limbs outside.

Only someone gripped by the keen knowledge that this stuff, all of it, every bit of it, has a use somewhere down the road, can grasp fully the value of junk, appreciate entirely its stark pragmatic beauty–what I call its beautility. Pablo Picasso could. Now there was a man who truly understood junk. "All his studios and homes–even the 18-room rambling La Californie at Cannes–were crammed and cluttered with junk–pebbles, rocks, pieces of glass, a hollow elephant's foot, a bird cage, African drums, wooden crocodiles, parts of old bicycles, ancient newspapers, broken crockery, bullfight posters, old hats, weird ceramics," Alden Whitman reported in his *New York Times* obituary of the great artist in 1973.

Even Picasso's bedroom was jam-packed with junk, according to his mistress, Françoise Gilot. "At the far end was a high Louis XIII secretary and, along the left-hand wall, a chest of the same period, both completely covered with papers, books, magazines and mail that Pablo hadn't answered and never would, drawings piled up helter-skelter, and packages of cigarettes. Above the bed was a naked electric light bulb. Behind the bed were drawings Pablo was particularly fond of, attached by clothespins to nails driven into the wall."

I cherish the image of Picasso working away there in his atelier, amid all the junk, kids and dogs racketing away in the yard outside, wreaking his art not despite the apparent chaos and clutter but from it, discerning the makings of a masterpiece in every single bit of it, transforming, for example, a bicycle seat and a set of handlebars into a bull's head. Some near kin of an im-

Freelancer John Neary, who also wrote about tools for SMITHSONIAN, *says that he often turns salvage finds into kitchen racks and iron sculpture in his spare time.*

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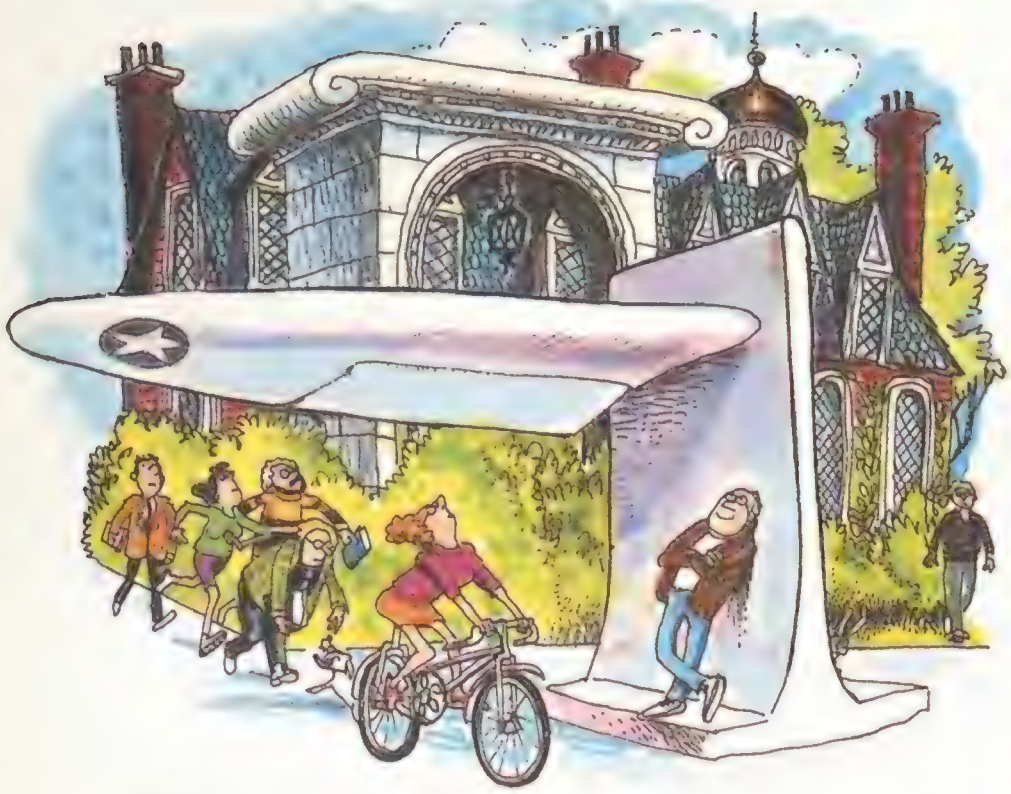


"The notion pleases me: all those earnest young strivers hurrying across the Yard, past the Neary Wing."

pulse, third cousin to that taunting example, I suspect, impels all of us junkophiles to assemble our troves. Mainly, though, I believe most of us are driven by the conviction that junk is, in and of itself, each and every bit of it, beautiful for its own sake.

Of course, I have my favorite pieces. That silvery aluminum airplane wing, for example, 16 $^{1}/_{2}$ feet of sleek aerodynamic curves left behind by the previous owner of this place–now that's almost a Brancusi all my very own lying there bridging the arroyo. I intend to leave instructions so that after I go to the big recycling center in the sky, the wing goes to some deserving educational institution. Harvard, if they'd like it. The notion pleases me, somehow: all those earnest young strivers hurrying across the Yard, past the Neary Wing.

Another favorite is my Folbate Model A-8 push lawn mower, made in England, no less. I lugged it home after I came across it a few years ago out in the middle of nowhere, on the edge of the Bisti Badlands in northwestern New Mexico, where there is not a blade of grass worth mowing for miles in any direction. Well, there was an old mine not far away and, nearby, what seemed to have once been a church or a school. Sometimes I picture this lawn mower arriving in a long-awaited crate one long-ago day, shipped perhaps by her mum so that the minister's homesick wife, or the schoolmarm, could tend a bit of homey British green there amid that harsh and savagely beautiful rockscape.

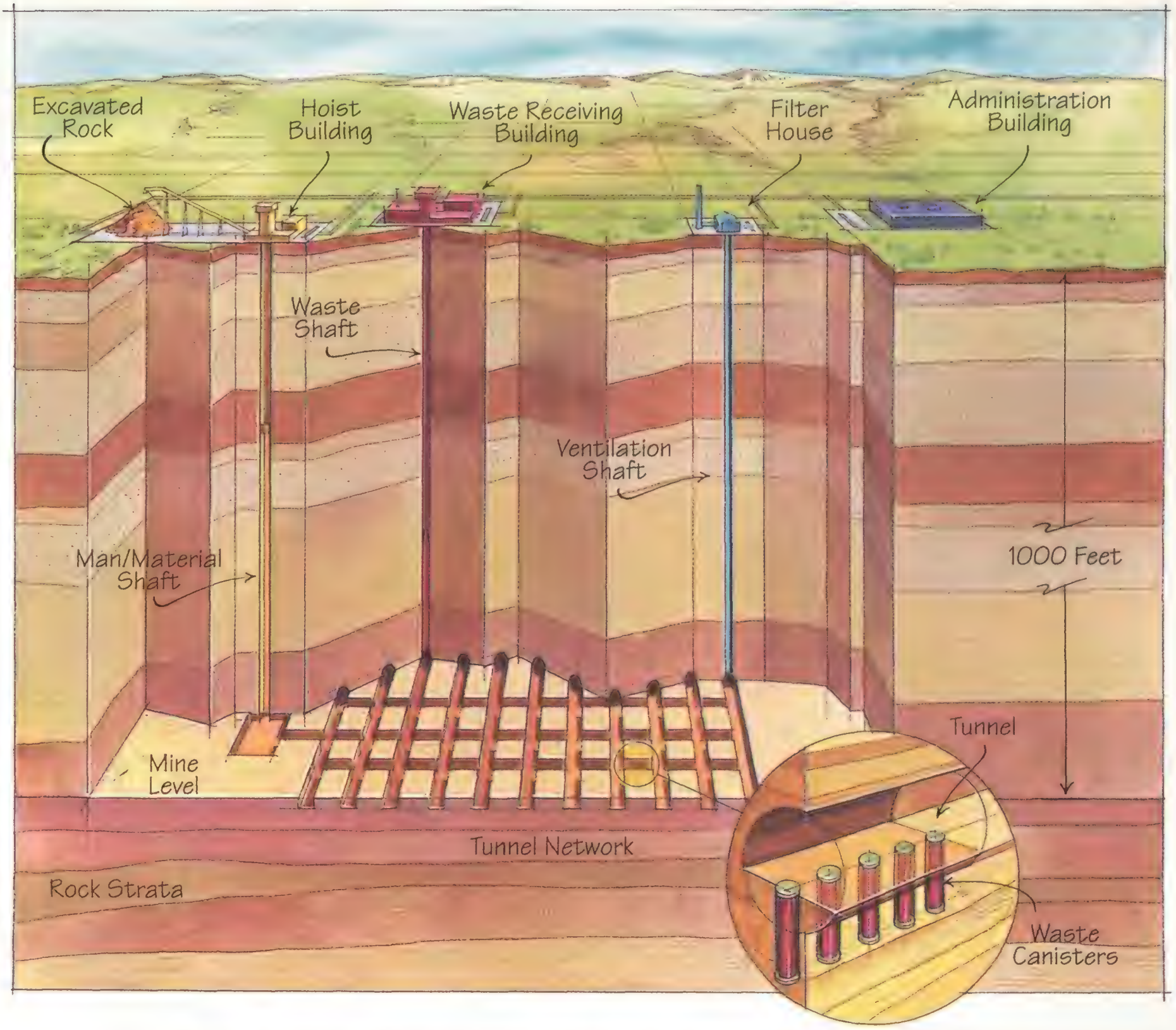
Among my other favorites there is a magnificent three-phase, one-horsepower electric motor stashed up in the attic, just awaiting the day when I master the differences among amps and watts and volts. There is my grandfather's old enlarger–made by Kodak so long ago their historian told me he had no record of it–with a cylindrical black iron lamphouse the size of a small locomotive boiler, a relic of technology before it turned from the era of cast iron and wood to the modern age of plastics and computer chips. There is not only somebody's old kitchen sink out in my scrap yard, there is a lovely old pedestal sink with antique fittings that photographer Eliot Porter gave me when he was remodeling his bathroom, both of them being kept on standby for when we remodel our own place someday.

If that time ever comes, we may have to consult with Jim Thomas. A legend among local junk hounds, Thomas is a cabinetmaker and teacher of woodworking. He has accumulated at his place outside of Madrid, an old mining town south of Santa Fe, nothing less than a miniature fleet of ancient trucks, some of them huge dumpers and flatbeds, along with tons and tons of antique millworking and blacksmithing equipment, and a great deal of forged, cast and fabricated iron, and countless board feet of lumber and massive weathered timbers. Lots of it. Several acres of it, in fact.

Another junkophile I know, Ed Grothus of Los Alamos, is currently being forced–by neighbors who live around the grocery store he has turned into a warehouse–to get rid of some of the tons of nuclear-laboratory surplus he has packed into it. Grothus, a former lab technician, claims he has made zillions selling oscilloscopes, radiation measuring devices and other castoffs to universities and other buyers through his surplus company. But anyone who watches Ed zoom through the salvage sale at Los Alamos National Laboratory knows that, like Jim Thomas and all the rest of us, he just loves the stuff and the quest for more of it.

At high noon, the race begins

For more than 30 years, this sale was a stunning portrait of junkies in action. Rain or shine, the pickups and flatbeds would grind up the steep road to the mesa top early on sale day, driven by junk hounds bent on getting a good spot next to the gate before their competitors arrived. By about 11:45 or so, close to a couple of hundred eager buyers would be jostling one another, pressing against the fence, some scanning the yard with binoculars, hoping to get an edge by zeroing-in on the precise whereabouts of some especially desirable goodies. Around 11:50 a lab employee would gingerly open the gate and the throng would surge forward–but only as far as the rope stretched across the macadam storage yard. A manager then sternly read the rules through a bullhorn: no running, no pushing allowed. At 12 noon sharp, the rope dropped and, in a scene reminiscent of a LeMans start, the crowd–walking as fast as it is humanly possible to walk without actually running–would



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Also agreeing on the safety and feasibility of this solution are the Environmental Protection Agency and the American Physical Society. For more information on the safe disposal of high-level waste, please write to the U.S. Council for Energy Awareness, P.O. Box 66080, Dept. D, Washington, D.C. 20035.

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scurry into the heart of the trove, buyers frantically scribbling "Sold" and their initials onto each claimed piece with felt-tip markers. The real hardballers came armed with premarked tapes and would rush through the aisles slapping their tapes–as fast as they could peel them off–onto the stuff they wanted.

Bins of brass and copper, heaps of aluminum and the huge pile of scrap steel all drew me to the sale. But I had a lot of tough, sharp-elbowed competition. Artist Tony Price, an ex-Marine Corps machine gunner, would be there almost every week looking for pieces of lab junk from which he makes his renowned antinuclear sculptures–wickedly funny kachina-like figures that mock the lab and its weapons and the boffins who make them. Frank Morbillo, a neighbor of mine, was there racing me to the pile whenever he needed more stainless for his monumental sculptures–one of which, appropriately, adorns the courtyard of Los Alamos' Bradbury Science Museum. Last year, alas, citing economics and safety, the lab cut the sale back from weekly to once a month–and quit selling scrap metal altogether, forcing us scrapoholics to continue our search elsewhere.

This nagging tropism that points us toward junk, like a compass to iron filings, has to be one of the most compelling efflorescences of the human psyche. Few other drives infuse their victims with the furious energy of the junkoholic on the quest for another manhole cover, another tractor seat, a really gorgeous sewing machine treadle, a seasoned-oak drive-belt pulley. There is, of course, sex, yes indeed–but as the late Texas writer David Snell, himself a savorer of the found object, said, "Sex is just a sublimation of Man's basic urge to browse in hardware stores."

Every once in a while, Joan threatens to call Cap Scrap and have them send a big truck to come clean me out and return our 14 acres to its woodsy high-desert pristineness. I counter with a reminder of how lucky she is that our yard doesn't look like Pablo Picasso's studio. I remind her how handy it is to have stuff around to fix things with, and I point out that next to mobilemeister Alexander Calder's shop, mine looks like an operating room. I usually wind up promising to build a sightsaving fence that would satisfy Lady Bird Johnson.

But I'm not too worried about Joan's threat because I happen to know that, should push come to shove, Rob, the Cap Scrap owner, is a man with a deep affection for metal–he and an associate used to tool around in a snazzy old Caddy convertible with a vanity plate that said "Big Iron"–and a fellow junk lover who would never be an accomplice to such an unfeeling raid. In fact, Rob once told me he almost went out of business his first year in the junk trade. The reason, he said, was because he and his wife, who herself makes sculptural assemblages out of found objects, could not bring themselves to sell the scrap they had bought. All that junk they'd acquired was just too beautiful to part with.

"I cherish the image of Picasso working away there in his atelier, amid all the junk, kids and dogs racketing away in the yard outside, wreaking his art not despite the apparent chaos and clutter but, rather, from it."

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During training exercises in L-1011 mock-up, flight attendant Renate Podegracz puts on her portable oxygen mask and demonstrates correct way for crew members to maneuver inside the cabin after a decompression.

By Bob Reiss

Under that smiling, calm exterior is a graduate Deltoid

To become flight attendants for Delta Air Lines, trainees must possess the skills of a PR executive, nurse and maître d'–or wash out of the program

When the gate agent in Fort Lauderdale announces boarding for the Delta Air Lines flight to Atlanta, chief flight attendant Marvin Scott takes his station by the door inside the plane and greets the passengers.

I'm on board the Lockheed L-1011, No. 714 in the Delta fleet, finishing up research on *Frequent Flyer*, my book about everything that goes into three days of operations on this 19-year-old widebody workhorse, one of a fleet that carries 80 million passengers a year. I've already spent time with the airline's chairman, air-traffic controllers, antiterrorism experts, and the plane's designer, dispatcher and pilots.

But watching the easy conversational exchanges between the flight crew and customers, I wonder how the passengers would feel if for some reason there were no flight attendants. Unnerved. At least that's how I would feel. When the door is closed, Scott (and the other 17,500 Delta flight attendants) becomes the company symbol to the public: the contact point between passenger and corporation, the touchstone of safety and poise.

During a flight, passengers hear a pilot on the intercom but rarely speak to one. The mechanics, food ser-

In the Image Center of the Delta Ground Training Center, trainee Stacey Sandberg practices new makeup techniques. She also must learn the restrictions that govern hairstyles, jewelry and uniform accessories.

vice and maintenance crews are strangers on the tarmac. The chairman of the board is a name in a newspaper. One frequent flier told me, "You know what's scary about flying? It's the feeling that once I'm strapped in my seat, I've put myself in a stranger's hands. Flight attendants give those strangers a face."

On Delta 714 Marvin Scott calmly directs an obviously weary businessman who walks on board. "Seat 20-A? Down this aisle, sir." Scott is the human face of the airline, and at a height of six feet, likes working roomier planes such as the L-1011. On 714 he is head waiter, head nurse, maître d' and public relations director. He wears a navy blue jacket and slacks, gold-plated 15-year wings on his left breast pocket and a conservative Delta tie–red background with blue crests. He doesn't have a beard or mustache: not allowed.

Over the intercom, Scott announces the flight number and destination. "You'd be surprised how many people get on the wrong plane," he tells me.

He and the other attendants close and latch the doors, then engage the mechanism that ensures that life rafts will automatically inflate in an emergency. He walks down the aisle to see if passengers are seated and buckled in, helps a woman lift a bulky carry-on bag into the overhead rack and hands a blue Delta blanket to the man in 4-D. He tells the pilot that everyone is down. Now the plane can be moved.

If the flight is uneventful, Scott's job is to direct the crew serving drinks, take note of passengers' moods and chat with them if they appear lonely or scared. Just his presence reassures the customers. If an emergency arises, he has been trained to handle it. If someone has a heart attack, he knows what measures to take to try to save the victim. If the plane is ditched in the ocean, he is in charge of getting everyone safely out of the aircraft. If a passenger goes berserk, which has happened to him, he knows restraining techniques.

"I've heard people refer to flight attendants as glorified waiters," I say to Scott after we take off. "I don't agree, but how do you react to that perception?" He shrugs. "A person's job is the integrity with which he performs it," he says. "And anyway, being a waiter is not negative to me. And someone did say that to me once, a man doing my taxes. We'd been talking about my job.

Photographs by Mark S. Wexler

Trainees practice wearing smoke hoods, which enable them to help passengers in the event of a fire.

How much time off I get. How much money I make. I could see him thinking, 'This guy's living a great life and making money doing it.' I think he was jealous."

In the early days of air travel, the airlines were desperate to attract passengers. But it never occurred to anyone to hire flight attendants to pamper customers and serve as examples of cool-headed imperturbability when the flying got rough.

During flights, the copilots served box lunches to the handful of travelers brave enough to risk the bumpy rides. In those days pilots were gun-toting, mail-guarding, seat-of-the-pants-type fliers; not the image the airlines wanted to project. Passengers preferred to see Jimmy Stewart at the controls, not Jack Palance.

Steve Stimpson, manager of Boeing Air Transport's San Francisco office, proposed hiring stewards, like the Filipinos who then served on U.S. Navy ships, small-statured men who could move easily in the cramped cabins. Then, one day, Ellen Church showed up in his office. She was a nurse at a hospital in San Francisco and a flying enthusiast. She proposed that Stimpson hire flight attendants, specifically nurses like herself who would come in handy when passengers became airsick.

Women bring "great psychological punch"

Stimpson shot off a memo to the home office: "It strikes me that there would be great psychological punch to having young women stewardesses . . . a couple of graduate nurses . . . it would be a mighty fine thing to have this available, sub rosa, if necessary for airsickness. Imagine the national publicity we could get from it . . . imagine the value they would be to us not only in the neater and nicer method of serving food but looking out for the passengers' welfare."

Pat Patterson, assistant to the president of Boeing, approved. So Ellen Church became the first chief stewardess. She and the other seven nurse-flight attendants Boeing hired had to be under 25 years old, weigh under 115 pounds and stand under 5 feet 4 inches in height. They wore green twill uniforms: double-breasted jackets and skirts, a coat that reached below the knees, chunky-heeled lace-up shoes and a beretlike hat.

They served the same meal, morning, noon and night: coffee, fruit cocktail, rolls, and fried chicken from steam chests. When one of the planes ran out of gas and landed in a wheatfield in Wyoming, the female attendant said that "people came in wagons and on horseback to see the plane. They'd never seen one before. They wanted to touch it and touch me."

If no seats were available on a flight, attendants sat on mail sacks. If the weight on a plane was too heavy for it to fly over mountains, pilots would off-load an attendant or two. In their generally masculine world, pilots resented having women crew members. Their

Serving drinks and food to passengers in a mock-up is an integral part of curriculum at the training center.

Each day Delta attendants serve 800,000 beverages and 200,000 meals and snacks on scheduled flights.

wives liked it even less. But the passengers loved it.

American added stewardesses in 1933, and TWA, in 1935. They passed out chewing gum to help equalize air pressure, and as planes got bigger, they turned down bunks and roused passengers on long sleeper flights to the West Coast and on the Pan Am Clippers to Hawaii.

Delta inaugurated female flight attendant service in 1940, between Atlanta and Dallas/Fort Worth. Birdie Perkins, one of the first, came from an Alabama hospital where she had been a night supervisor of nurses. Her $60-a-month salary jumped to $110 at Delta. Perkins' two-week training included courses in food service, ticketing, scheduling and meteorology. She was required, on paper, to be able to make an instrument landing.

Perkins and other Delta attendants were warned that passenger complaints meant instant dismissal. They served food and coffee. But what they didn't do, what no U.S. airline did in the 1930s, was serve liquor. Pan Am provided overseas passengers with wine and hard drinks, but it wasn't until the 1950s, when most states finally repealed their prohibition laws, that Colonial Airlines began serving liquor on flights to Bermuda. The response was so enthusiastic that TWA and American put drinks on too. Delta, with its large number of Bible Belt passengers, held out. But drinks on planes were popular, and Delta relented in 1958.

By the early '60s, being a stewardess was the most glamorous job that a whole generation of future flight attendants could imagine. A friend, an airline attendant, told me about her guidance counselor in high school who laughed at her when she, an honors student, said she wanted to be a stewardess. "Smart girls can do better than that," he said. Years later, when she was a stewardess, she ran into him again. She told him stories about traveling free to London, Zurich and Cairo and spending off-duty time in Greece. "I envy you," he said, forgetting their earlier conversation.

It isn't easy to be accepted into Delta's flight attendant school. Of the 14,000 applicants annually, fewer than 1,400 of them are accepted. "And not everyone who gets in gets through," Marvin Scott says.

At the school, Scott the individual was molded into Scott "the Deltoid," as Atlantans affectionately call Delta employees. He learned that his treatment of passengers

This article is adapted from Frequent Flyer *by Bob Reiss, published this month by Simon & Schuster. He has authored six books, including* The Last Spy.

In first-aid training, classmates Nathan Cook and Marijo Fielding practice the Heimlich maneuver.

During "ditching-in-the-ocean" class, Marcus Skeete follows strict procedures to evacuate passengers.

could be a big reason why they come back. If one of Delta's strengths is service, as industry analysts say, then in a world where dozens of airlines with similar safety records reach the same cities, on the same schedules and often at lower fares than Delta's, Marvin Scott could make the difference.

To qualify for training, applicants have to be at least 20 years old, between 5 foot 1 and 6 feet tall, have weight in proportion to height, and decent vision. It's a plus to have experience serving the public, and Delta wants some college credits or equivalent training.

"That experience indicates a person has dedication, commitment," said Debi Hamby, a former attendant and current manager of flight attendant training. I met her when I visited classes at the Delta Ground Training Center at corporate headquarters in Atlanta. The course lasts five weeks and goes six days a week.

Hamby walked me through the school before I went to the classes. She is a petite, perky woman with a flight attendant's smile, which could harden into something more corporate if necessary. The school, like the rest of the complex, is boringly functional: bare walls, no-frills capitalism. The ghost of frugal founder C. E. Woolman seems to have directed the architects, saving money that has gone toward higher salaries, better health benefits and employee retention during cutbacks.

"In the school," Hamby told me, "students study FAA emergency procedures, plane operations and customer service. We sprinkle proficiency tests through the curriculum to test whether they can operate complicated equipment. It's important to know how they handle stress-related problems and physically handicapped passengers. In flying, you don't get many second chances."

In the school's Image Center, where beauty consultants advise students on their appearance, I saw a board labeled "Unauthorized Accessories." There was a blue banana-shaped hairclip. "Banana clip is wrong color blue," read its tag. A black bow tie: "Fabric is too shiny." Silver earrings: "They dangle." A barrette: "Too ornate." And on an adjacent board were accessories that do fit the carefully cultivated Delta image: "Three rings are permissible. No more than two rings may be worn on one hand," said one notice. "Stud earring. Gold, silver, pearl, or color-coordinated studs on gemstones."

The specifications seemed comically rigid until I remembered the comments of friends when I told them I would be spending time with flight attendants. "They're always so perfect," one woman lawyer said wistfully.

But students concentrate on much more than their physical appearance. In a class held in a mock-up of a Boeing 727 cabin, I saw a dozen students clustered around a serving cart as a classmate breathed into the mouth of an infant-size doll, practicing CPR. In another room, adult-size resuscitation dolls lay scattered like bodies after a crash. As usual, every job, including life-saving, was broken down into step-by-step procedures.

Student Janet Malone learns how to lift "sick passenger" Ramesh Mehta from his seat to the aisle for first aid.

We visited an area where students practiced opening various emergency doors while the rest of the class looked on. "Who goes next?" the instructor asked. A shy-looking blonde woman stepped forward and stood beside the massive sliding door of a 757. Suddenly the room was filled with the taped sounds of an airliner going down. The class cried, "Grab ankles! Get down! Stay low!" Then the screaming nose-dive noises stopped. "Evacuate!" the class yelled. "Release seat belts! Get out! Get out!" The student at the door worked the levers. The door slid open. "Come this way! Jump and slide!" she shouted. The class clapped. Good job.

The mock-up room seemed like fun at times, the atmosphere reminding me of one of those make-money-quick seminars where motivational speakers pump up real estate salesmen. Nevertheless, even make-believe emergencies get scary. Especially in the simulators, actual fuselage sections mounted on hydraulic stilts designed to pitch the cabin around as it would move in a crash landing, midair collision or runway crash.

I went through one emergency evacuation class in a simulator. Inside, it looked exactly like a plane; same seats, same aisles, blacked-out windows as though flying at night. The whole cabin rocked gently. It felt as if we were at 33,000 feet, sailing along on the jet stream.

About 30 women sat inside, in neat jeans, sweaters and new white socks. The only thing that seemed out of place was the man in a glassed control booth where the forward lavatory should be. Pushing buttons, he was about to make the plane "crash." What made the scene more ominous than usual was the fact that two days earlier a USAir plane had pitched into New York harbor after a missed takeoff from La Guardia Airport. Those flight attendants had coped with the real thing.

Suddenly the plane pitched to the right as a landing gear "collapsed." If the situation were real, we would be skidding across the ground, a wing filled with jet fuel dipping toward the runway as the pilot tried to keep it from touching and blowing up or catching fire. The lights went off. We had to leave–fast. The women yelled, "Release the seat belt! Go to the back! Hustle! Move it ! Let's go!" They shouted, "Keep moving! Arms out!"

With the red fire light pulsating, I moved with other passengers toward the rear door. The slide looked awfully high, even though it terminated on a carpet. I must have hesitated too long. I was supposed to cross my arms over my chest and step out, the way all the cartoon passengers do in those seatback safety instructions.

"Move it!" yelled the instructor behind me. I jumped.

Ten minutes later I went to swimming pool class, ditching-in-the-ocean class, what-if-the-714-goes-down-in-the-Pacific class. This time the women thrashed around in an Olympic-size pool, trying to climb into a big yellow raft, the kind Delta 714 carries. The first two made it easily, pulling themselves up. Another had trouble, fell back into the water, tried again, fell back. The

The smoke in a burning airplane can overcome passengers in seconds, and so flight attendant trainees are videotaped during simulated crisis conditions and evaluated on the speed of their emergency responses.

others grabbed her and hauled her in, sopping wet.

Soon the raft was filled with flight attendants; it holds up to 50 people, the instructor said. I saw lots of the little extras that come with the raft: stubby foot-high protuberances that support a tarp to protect survivors from the sun and catch rainwater for drinking; red blinking lights powered by a water-activated battery; an emergency locater-transmitter radio to help the rescue planes find the raft; a survival kit with red flares for daytime and white ones for night; desalting tablets; a pint of potable water (which did not seem like much); a whistle to call boats in fog; Dramamine tablets for seasickness; a flashlight; one hand pump to pump water out, another to pump air in; and hard candies to moisturize dry mouths. My favorite was the package with six vitamin C tablets. "Six vitamins?" I said. "For 50 people? What can you do with six vitamins?" Pilot instructor Bob Stallings, looking on, laughed. "Eat a lot of fish," he said.

After surviving the dousing, I went on to customer service class, one-third of the curriculum at the school. Again, about 25 women attended. Instructor Jill Jackson gave them troublesome-passenger problems to solve.

"Saying 'I'm sorry' is a pretty good tool with customers," Jackson told the class. (She is currently a flight attendant with 12 years on the line.) "But some problems call for action." She went rigid, hands balled at her sides, chin straight ahead. "What kind of customer is this?" she asked. The students chanted, "Combative!" "Where's this passenger most likely to sit?" "The aisle!" Gee, I thought, I sit on the aisle. Charts on the walls listed other types of passengers, each to be handled differently. There are the "I win, you lose" passengers, the combative kind Jackson had acted out. The "I win, you win" passengers, everybody's favorite, those who let attendants know their needs without being obnoxious about it. The passive customers, a trickier type since they feel hurt if flight attendants don't guess what their needs are. "What's the passive customer's best weapon?" Jill asked. "Writing a letter of complaint," one student answered. "Writing a letter? Maybe. But he won't come back," Jill said. And there it was. The threat. That passive passenger would take his money and give it to another airline. As she spoke, I saw all those smiling flight attendants on Delta 714 serving drinks, answering questions. Now I realized that they were surveying the aisles as they worked, thinking, "Ah ha! 25-D! Passive passenger!"

"Watch yourself and your body language," Jackson continued. "Some of us roll our eyes, and we all have expressive faces." Infected by their boosterism, I hoped I was an "I win, you win" passenger.

Next, Jackson posed a problem the trainees might encounter: a businessperson on a flight is furious over a delay. What is the correct response? "I understand the importance of your meeting. However, the captain's priority is to ensure we reach our destination safely," one trainee suggested. Boo, I thought. That answer would not make me too happy. "Anybody else?" Jill asked. Another responded, "Can I get you a cup of coffee now?" "Good," replied Jackson. "Immediate gratification."

Then came the closed-circuit television session. The trainees stood in pairs, acting out the role of flight attendants greeting passengers. The session was videotaped so that students could later evaluate their posture, speech and facial expressions. The instructor walked shyly up to the first pair and handed them a note. She was a pretty good actress. The first "flight attendant" giggled. The note read, "I only speak Russian." The second student led the "passenger" to her seat.

Then the instructor played the role of a loving wife–well, at least she told the next two students she was a lov-

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After 15 years and thousands of miles, flight attendant Marvin Scott has mastered his multifaceted profession.

ing wife. "Is Edgar aboard?" she asked softly. "He left his keys." Jackson warned the class about answering such a question: "When a person buys a ticket, the passenger enters into a legal contract. We protect the identity. If you choose to go in and find the passenger, who then says 'I don't want that person to know I'm here,' be prepared to walk out, lie through your teeth, and never give away that you've conversed with our customer."

When the class took a break, I chatted with Susan Fadal, a raven-haired woman who had handled her mock-passenger scenario with aplomb. She looked about 24 years old. She told me she was 36. Fadal said she had sold her jewelry store after what she characterized as a bitter divorce. "I needed a change." She'd been told that when she graduated in a week, she'd be assigned to Cincinnati, her first choice. "Becoming a flight attendant will be fulfilling a dream," she said.

Tammy Duffy, who had also handled the troublesome-passenger exercise well, had been an executive for Hitachi in Houston, Texas. "I met my husband, transferred to Chicago, took a position in marketing and stressed out," she said. "My husband said I could do whatever I wanted. I'd always wanted to be a flight attendant. I'm thrilled. I'll be home a lot and we can travel. The Delta benefits are good. I got an offer from every airline I interviewed with, but my heart was always with Delta. I'm a Southern girl."

Five percent of Delta flight attendants are male. Marvin Scott didn't even know that men could get that kind of job when he entered Georgia State University to study journalism in 1974. He worked hard to put himself through school, but after three and a half years, he had to quit to get a full-time job. "I met a man who was a flight attendant for Eastern. He talked about the job and the time off it provided. I applied and was accepted immediately." I ask Scott if he ever encountered the same problem passengers that he had trained for at school. "Yes," he replies. "Recently a passenger went berserk on one of my flights. He clutched his leg, screaming he was having a stroke. I asked if I could help him. Then he started yelling, 'Kill the crew!' We immobilized him. He screamed that the second officer was a spy. He screamed that he was ruler of the world.

"There was a Secret Service agent on board who helped us restrain him," Scott continues. "He was tied up for about an hour and a half."

I ask Scott and the other attendants on my flight to Atlanta if they have more passenger stories. Boy, do they. There is the one about a woman who was traveling with her child. She thought the movie *Mermaids* was too risqué and threatened to stand up in front of the screen. The captain had to tell her, "If you so much as move, I will land the plane and put you out of it."

Another attendant tells of her first flight overseas, when a woman confided that two men were following her, trying to kill her. The attendant could see the two men in the back. To calm the passenger she moved her up toward the front. But the two men got up and moved forward, too. She then moved the woman to first class and alerted the authorities at the other end of the flight. "When the plane landed, police took all of them away."

"One of our attendants is out of uniform"

The attendants laugh at the funny experiences, but there are scary times, too. Scott says, "Like when the plane is taking off and suddenly the brakes go on, or when the plane dives abruptly. I get a knot in my stomach. Some passengers are unaware. It lasts 15 seconds. If we don't hear a big *boom*, we know it's OK." He laughs. "It only happens once every couple of years. Ninety-nine percent of the flights are routine."

But even routine flights are hard work. I found that out when I decided to be a Delta 714 attendant on the flight between Honolulu and Los Angeles. I put on the blue apron, brushed up my smile and wheeled out a beverage cart. "You may notice that one of our attendants isn't exactly in uniform," the coordinator announced jovially over the intercom as I started serving drinks. "He's a writer. Doing a book about this plane."

Book, hell. Where's my drink? The instant I started

serving, my world turned into a tunnel filled with hands reaching out in the aisles, like a scene from *Night of the Living Dead.* Requests came quickly: tomato juice, beer, coffee. My flight attendant partner smiled impatiently. I was slowing up service.

I'd never seen so many hands in my life.

Delta 714 is in the air, heading northeast through a black, starry night. Scott has already checked the number of meals against the number of passengers. He made sure, before we took off, that all the emergency equipment–fire extinguishers, megaphones, oxygen bottles–worked. He directed the in-flight service and made announcements. The return trip from Fort Lauderdale to Atlanta is Scott's last flight for the day, so after we land he goes to his three-bedroom house in Sandersville, Georgia, where he grew up.

The next day (his day off), Scott will go to work in his commercial photography studio. He also teaches aerobics. He tends to work long flight schedules, bunching up his free time so he can do other things. Like a surprising number of other people I met at Delta, he doesn't use his free travel passes much. He is too busy at home.

As the lights of Atlanta grow visible below, the seat belt signs go on. Scott checks with the captain and advises the passengers that we will land within 20 minutes.

My rotation is over. It is hard to believe I've been on Delta 714 for only three days, not three weeks. Hard to believe the plane has traveled so far in 72 hours. From the ground we are just one more light floating down toward the airport. In a month, when I ask Scott for his memories of our flight, he recalls nothing special.

Delta 714 touches down and rolls to the terminal. Scott goes back to the doorway, hands folded, smile in place. The big engines are cooling. No new flight crew waits outside. From the cockpit, I can see people waiting in the terminal, watching for friends and loved ones. A boy holds roses in his hand, smiling, shifting from one foot to the other. Twin girls press against the glass, waving at the crew in the lighted cockpit. Back in the cabin, passengers file out, heading home.

"Thanks for coming. Come again," says their host, Marvin Scott.

Student attendants try "sit and slide" techniques in emergency evacuation from a full-sized aircraft mock-up. The slide is for emergency landings on the ground; it can also be used as a raft if airplane ditches in water.

On Kiawah, sunset is our signal to gather on the back porch, glowing from hot showers and the faint blush of fresh tans. Any minute, we'll be noisily going about the business of starting dinner and doors will slam and dogs will bark and someone will put on music. But for those brief moments, as the sun drops behind the live oaks, we are together and we are quiet. I look around at our kids who are growing up so fast and my husband who works too hard, and I have the feeling I often have on Kiawah, that every minute of living is so important and we let it go by too fast, without stopping to notice how priceless every ordinary hour can be. Kiawah Island The beach is only the beginning.

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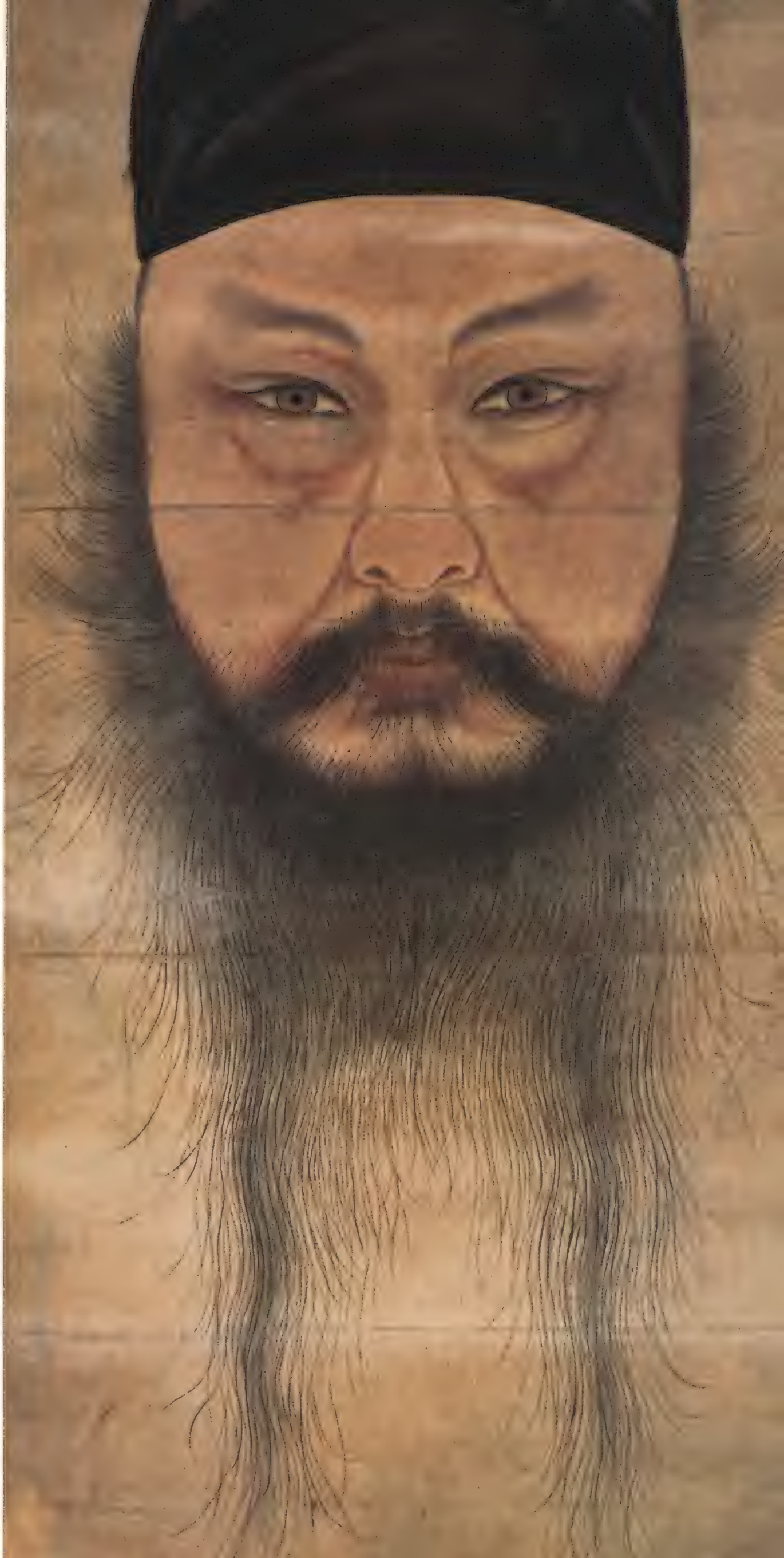
Korean art: bold and beautiful

Masterpieces of the 18th century reveal the depth and vitality of this ancient culture's renaissance

Korea is a survivor, in spite of the fact that–even today–it is torn apart. Located at a strategic geographical crossroads–China to the west, Manchuria to the north and Japan only 130 miles to the east–this small, mountainous peninsula endured countless invasions and occupations through the centuries and still maintained its own culture. With the bedrock of its own language and an enduring belief in shamanism, Korea borrowed from China's model, adopting first Buddhism, and then Confucianism. Korea also contributed to other cultures–if sometimes unwillingly–as when the troops of invading Japanese warlord Toyotomi Hideyoshi went home in the 1590s with scores of captive Korean potters because he was so enthralled with the ceramics he found there.

But with the overthrow of Ming China by the barbarian Manchus in 1644, Korea faced a new kind of crisis–an identity crisis. The sense of loss, writes historian JaHyun Kim Haboush, "was comparable to that experienced by the Christian world after the loss of the Holy Land to the Muslim world." During a tumultuous and often bloody half-century, the court, bureaucracy and scholars struggled over what it meant to be the keeper of, rather than a satellite of, the Confucian world order. Korea emerged from this soul-searching in the early 18th century



In self-portrait, poet-artist Yun Duso confronts viewer with intense directness.

Yun Yong-son Collection, Haenam

with a renewed sense of self–an awakening that fueled a century-long renaissance in the arts.

It is this era that is brought to life by a major exhibition, "Korean Arts of the Eighteenth Century: Splendor and Simplicity," which is now traveling in the United States. Jointly organized by the Asia Society Galleries in New York, where it opened last year, and the National Museum of Korea, the show will be at the Smithsonian's Sackler Gallery from February 20 through May 15 and will then move to the Los Angeles County Museum of Art. On display are not only paintings–scrolls, screens, album leaves–but also other intriguing and beautiful objects, from a lacquered wood cosmetics chest, to an inkstone in the shape of a flat-bottomed ferryboat, to cloth *pojagi*, which were used to wrap bedding or other bundles (like quilts, they were pieced together by housewives).

The paintings in the show, of which a selection is shown here, express the mood of the century with astonishing range and virtuosity. There is the riveting immediacy of a self-portrait by Yun Duso (p. 99), who used a mirror as he painted, while in the scenes of everyday life there is humor and, at the hand of Sin Yumbok, a touch of the risqué.

Among the many masterpieces is the magnificent scroll *Twelve Thousand Peaks of Mount Kumgang* by Chong Son, founder of the true-view landscape painting movement. Works such as this, depicting Korea's beloved natural places, served as mementos of a visit or, for those unable to make the journey, as a substitute for the real thing.

It's sobering to realize that even today, as Korea once again finds itself in turmoil, this painting of Mount Kumgang still serves South Koreans as a substitute: the actual mountain is north of the DMZ and thus off-limits to them. Instead of going to the mountain, their pilgrimage is to the museum outside Seoul where the scroll hangs when it's at home. Along with other great works of art, this painting continues to remind them of who they are.

Constance Bond

Ho-Am Art Museum, Yongin

Kansong Art Museum, Seoul

In *Women on Dano Day*, Sin Yunbok shows women relaxing as men spy on them; his erotic themes are said to have displeased the Bureau of Painting.

Books and Scholar's Utensils, an eight-fold screen by Lee Hyongrok, is a dazzling example of decorative painting. Among displayed objects are Chinese porcelains, much admired by Koreans.

Royal Museum, Seoul

The Universe in perfect harmony was theme of a pair of four-fold screens that was placed behind Korea's ruler; here, in a detail of *Sun, Moon and Immortal Peaches*, the sun warms the sacred land.

Onyang Folk Museum, Onyang

Painting of the Big Dipper, almost eight feet long, is believed to have been used by the shamans of Seoul in a ritual for the well-being of the king.

Dokwon Art Museum, Seoul

Kim Hongdo and Im Huiji collaborated on *Tiger and Bamboo*; forceful brushstrokes for flexible bamboo complement softness of fierce tiger.

Kansong Art Museum, Seoul

Chaos reigns in Kim Duksin's *Chasing a Cat* as an elderly man, trying to stop the culprit with his pipe, falls off porch with the mat he's weaving.

Twelve Thousand Peaks of Mount Kumgang, a scroll painted by Chong Son, is bird's-eye view of a place much loved by Koreans since ancient times.

金剛全圖

THE CRUSADER.

Pro Labore et Justitia.

NEW ORLEANS, LA., SATURDAY, JULY 19, 1890.

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The language of Senator Dunn upon the passage of the separate car bill in the Senate, indicates that the Democrats meant to pass the law as a punishment to the colored people. The chastisement it seems was predicated on two counts:

1. That the Republican Senators had voted for the Lottery.
2. That the Republicans in Washington had voted for the force bill.

If the vote in the Senate was prompted by such a motive, we would be curious to know what cause actuated that given in the House? The more reasonable hypothesis would be that the Negro stands in the same relation with the white as that which, according to the fable, exists between the wolf and the lamb.

All the cavils and sophistries advanced on the question are just so many unnecessary efforts which only serve to conceal the real [illegible]

We did not hear what reason th[illegible]

THE STATE

vs.

Homer Adolph Plessy

June 8/92

Viol. Sec. 2 Act 111, 1890.

PROSECUTOR:

Asst. C. C. Cain

DECISION.

Examination Waived

C. C. D. B. $500

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June 8, 1892.

(Signed) A. R. Martin

Judge First Recorder's Court.

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Filed July 20th 1892

THE VIOLATION

—OF A—

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PUBLISHED BY AUTHORITY

—OF THE—

CITIZENS' COMMITTEE.

IN THE WRONG COACH

A Stuff-Colored Descendant of Ham Kicks Against the Jim Crow Law

By Keith Weldon Medley

The sad story of how 'separate but equal' was born

In 1896 New Orleans shoemaker Homer Plessy asked the Supreme Court whether the U.S. Constitution meant what it said–and he lost

"On Tuesday evening, a Negro named [Homer] Plessy was arrested by Private Detective Cain on the East Louisiana train and locked up for violating Section 2 of Act 111 of 1890, relative to separate coaches. . . . He waived examination yesterday before Recorder Monlin and was sent before the criminal court under $500 bond."

This modest announcement appeared in the New Orleans *Daily Picayune* on June 9, 1892. Little noticed at the time, it recorded a moment of tragic significance for the people of America. For it marked not only the end of an era that had begun with Reconstruction, but the start of a half-century in which the rights and hopes of black people in the South, briefly raised up by Reconstruction, were all but extinguished.

In time it would make famous the names of a New Orleans shoemaker and a judge from Massachusetts, as the joint label on the landmark Supreme Court decision Plessy v. Ferguson. The issue was apparently resolved by the Court in 1896. But the running racial and judicial struggle involved did not have its most dramatic climax until a half-century later, with the decision known as Brown v. Board of Education.

Confrontation over a place in a public conveyance suggests a parallel with Rosa Parks. But her refusal to give up her bus seat to a white passenger in Montgomery, Alabama, was partly triggered by happenstance. Plessy's action on that warm New Orleans afternoon a century ago was an act of civil disobedience carefully planned and orchestrated by a group of black Republicans, lawyers and journalists known in the French-speaking areas of New Orleans as the Comité des Citoyens.

The story of their case and of their calculated yet desperate judicial fight is rooted not merely in the history of what happened in the South after the Civil War, but in the texture of life in New Orleans itself. Even before the Civil War, New Orleans had been a rich, cosmopolitan trading port and a place where people of color had accomplished a great deal.

Originally French, then Spanish, then French again before being bought by Thomas Jefferson in 1803 (along with what would become half of the United States), it was a city with a remarkable mix of colors and cultures, as well as a penchant for violence and vice. On the eve of the war in 1860, the population was pushing 170,000, including 25,000 Irish and 20,000 German immigrants, and 15,000 African-American slaves about to be freed. But New Orleans also had a greater concentration of free people of color than any other city in the Deep South, some 10,000 people who had gained their freedom well before the Civil War began.

Homer Plessy was born free in March 1862, only a month before Yankee gunboats overran the city's Mississippi River defenses, taking control of the port while the war lasted. Like Plessy's family, many black New Orleanians were French-speaking and Roman Catholic. Some had come from Haiti to escape the bloody revolution at the beginning of the 19th century, when Haitians won their independence from France. Some had fought in 1815 with Andrew Jackson against the British in the Battle of New Orleans. The majority were working class, but many were landowners, businessmen, skilled artisans.

Full inheritances and paternal surnames

Though interracial marriage had been officially banned and streetcars segregated, the city had fewer social restrictions about intermingling between whites and blacks than other areas in the South. Many de facto marriages between the races lasted a lifetime; the children produced often received full inheritances and paternal surnames. Some were sent to Europe for their education. Some became rich and prominent citizens.

So hopes ran high on June 11, 1864, as thousands joyfully gathered in Congo Square, the site of weekend slave gatherings, to celebrate a great event: on May 9 of that year, Louisiana had approved an emancipation ordinance. Ratification of the 13th Amendment to the Constitution would come in 1865, followed by the 14th in 1868, which said that if you were born in the United States you

Records and images from Plessy v. Ferguson reflect the varied elements involved in the landmark case.

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In early woodcut, lately freed slaves line up to vote in New Orleans. They would play a major role in Southern politics from 1867 until the 1880s.

were a citizen, and that no state could deprive you of your rights, liberty or property without due process of law. By 1870 the 15th Amendment made clear that no citizen could be deprived of the right to vote on the basis of race, color or previous condition of servitude.

In 1867 New Orleans removed the black stars previously used to designate the city's segregated streetcars. That was the year of the Reconstruction Act, passed by still-powerful Radical Republicans in Washington, which sent U.S. armies of occupation into the South and gave military commanders in five areas there the right to protect life and property with federal force. They set up a procedure to register voters and see that lately freed slaves were allowed to vote, held elections, established black schools, and created machinery whereby Southern states were to ratify the 14th Amendment. In New Orleans and all over the South, Army commanders had the power to appoint and dismiss local officials.

Keith Weldon Medley is a native of New Orleans who frequently writes for the New Orleans Tribune.

By 1869 when Homer Plessy was 7, New Orleans began experimenting with integrated public schools–the only Southern city to do so. Blacks served with whites on juries and public boards. New Orleans had an integrated police department with a color-blind municipal pay scale. Thanks to Reconstruction, too, Plessy grew to manhood while blacks, who made up most of the Republican Party in the South, voted enthusiastically in large numbers and served in high office. Between the years 1868 and 1896, racial intermarriage was made legal, and Louisiana elected 32 black state senators and 95 state representatives. It had the only black governor in U.S. history before the late 1980s. (In the same period the South as a whole voted 600 black state representatives into office and sent 16 black congressmen to Washington.)

Apparently Plessy left no papers. City records, however, tell a good deal about him and about the racially mixed, middle-class faubourg, or suburb, where he lived. He began making shoes in 1879, married Louise Bordenave in 1888 and attended mass at St. Augustine's Catholic Church on St.

Claude Street. The church had been established by whites and free people of color before the war; services were conducted in French and Latin. The newlyweds could afford to rent a house near the corner of Ursulines Street on North Claiborne Avenue in the Faubourg Tremé.

Outside the Plessys' bedroom window was Congregation Hall, home of Saturday night "grand dancing festivals" where, for 15 cents, New Orleanians swayed to the sounds of Professor Moret's String Band. By the 1890s, Tremé had become an integrated enclave of several races, numbering among its residents many musicians and artists, who tended to be radical and egalitarian. There were also a number of dramatic clubs and benevolent religious societies that would contribute heavily to the Comité des Citoyens, among them the Société des Francs Amis (Homer Plessy became its vice president), which provided medical and funeral expenses for dues-paying members.

Following the Civil War, the full-scale occupation of the South as a defeated nation, along with Reconstruction programs, cost the American taxpayers considerable money, not including the pay and maintenance of the 6,000-odd federal soldiers. Yet for years the Republican Party, dominated by former abolitionists, maintained the political power and the will necessary to try remaking the former Confederate States.

There was no swift and easy way, however, for four million ex-slaves, just freed and without education, to be integrated into a racist, bitterly defeated and economically collapsing South. Race hatred, intimidation and riots flared. The Ku Klux Klan spread pamphlets and terror, which eventually included the murder of influential Reconstruction figures both black and white. It also embarked on the systematic intimidation of newly enfranchised black voters. The power of the Republican Party in Southern states, overwhelmingly based on those same black voters, began to wane, and Southern Democrats started to take back the South. The power of Republicans in Washington, especially after the Recession of 1873, was vulnerable to Democrats who could claim that Reconstruction cost money and had no hope of success.

In the North there had been optimistic expectations for economic recovery in a free-labor South and for the immediate effects of black suffrage. "We need no vast expenditures. We need no standing army," Senator Richard Yates, a Radical Republican, had once declared. "The ballot will finish the Negro question." By the early 1870s that was clearly not so, and just as clear was the fact that many states in the North and West, which as late as 1868 did not permit black suffrage or

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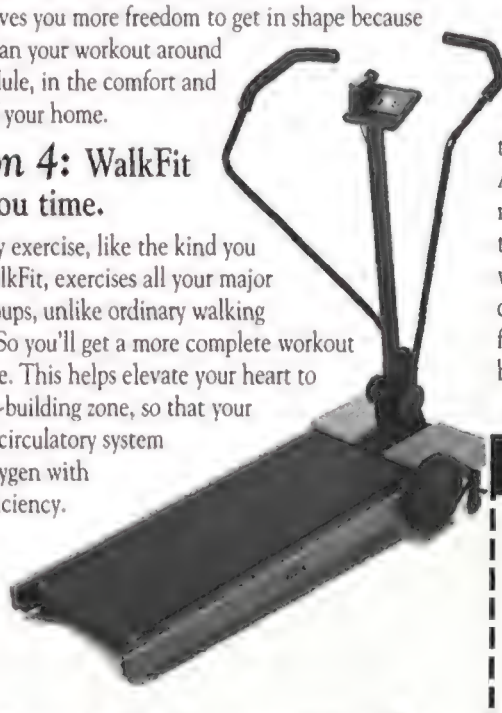

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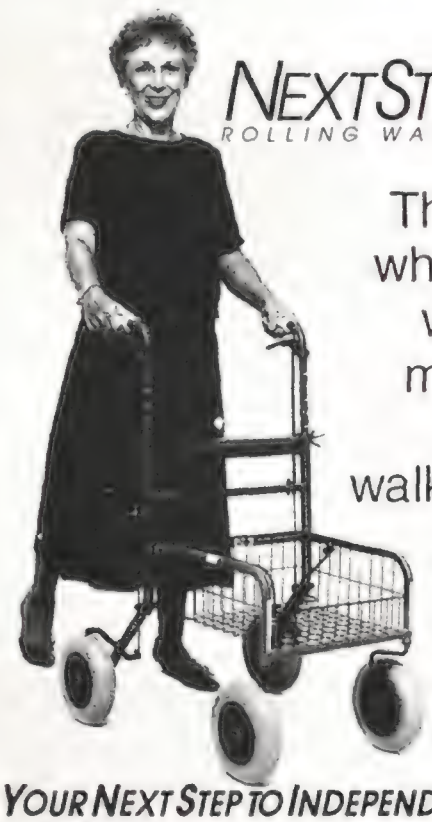

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An 1872 portrait of the first 7 of 16 blacks elected to the U.S. Congress during Reconstruction. Some 600 served in the Southern state legislatures.

integration, would not long concern themselves with the rights of blacks in the South. After the ratification of the 15th Amendment, an Illinois newspaper expressed a prevalent Northern view: "The Negro is now a voter and a citizen. Let him hereafter take his chances in the battle of life."

The specific political event that brought an end to Reconstruction and the withdrawal of occupation troops from the South was the Presidential election of 1876. Republicans had dominated national politics since Lincoln. But in 1876 neither Republican Rutherford B. Hayes nor Democrat Samuel J. Tilden got enough undisputed electoral votes to win. A deal was made, known as the Hayes-Tilden Compromise. Hayes would become President by being ceded the electoral votes of a number of Southern states in return for recalling the armies of occupation (they departed in 1877) and yielding to Democrats the control of the last three Southern states–including Louisiana–still run by the Republican Party. For their part, Southern Democratic leaders in those states agreed to maintain civil rights policies.

Among them was Louisiana's Democratic gubernatorial candidate Francis T. Nicholls, an ex-Confederate general who lost an arm and a leg in the Civil War. Nicholls swore to uphold "equal rights and common interests" and to "obliterate the color line in politics." For a while he kept his word. But without the Reconstruction programs and the bayonets of the armies to support them, lately freed blacks were at a hopeless disadvantage. All over the South, the advances made in the 1870s began to be undone. The pace accelerated in 1883 when the Supreme Court, which was also changing its makeup, declared the civil rights enforcement act of 1875 unconstitutional. This meant that the federal government, lacking the means and will, pretty well got out of the business of making sure that the new civil rights laws were applied in the South.

The erosion of civil rights went more slowly in New Orleans than elsewhere. But the city began reestablishing segregated schools, and in 1890 Nicholls approved the Louisiana Legislature's passage of the Separate Car Act.

The act decreed "equal but separate

accommodations for the white and colored races" on Louisiana railway cars. Under its terms any railway company that did not provide separate coaches for blacks and whites could be fined $500. Except for "nurses attending children of the other race," individual whites and blacks would be forbidden to ride together, or risk a $25 fine or 20 days in jail. It was the passage of this bill that finally launched Homer Plessy into history. The fight involved a black newspaper, *The Crusader*, the six remaining black state senators and ultimately the Comité des Citoyens, which coalesced around *The Crusader*.

At the State Capitol, Senator Henry Demas thundered at his fellow legislators: "Like the Jews, we have been driven from our houses and firesides, from our churches and schoolhouses . . .and from the elevated avenues of livelihood, and now, in order to reach the lowest depth of infamy. . .you are willing to forget that you are men and vote for the passage of this bill." But the Separate Car Act passed the Louisiana Senate by a vote of 23 to 6.

The Crusader was a formidable enemy. A weekly founded in 1889 by attorney Louis Martinet to combat the increasingly virulent racism of other New Orleans papers, it called itself "spicy, progressive, liberal, stalwart, fearless," and stood for "A Free Vote

By 1870 Ku Klux Klansmen were busy killing and beating up black voters.

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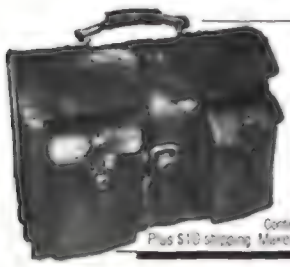

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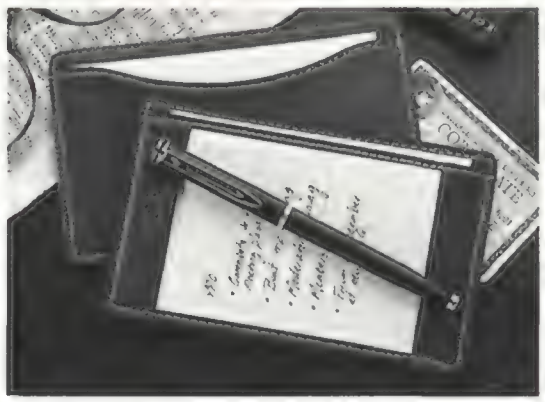

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Crusader columnist Rodolphe Desdunes led attack on the Separate Car Act.

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and Fair Count, Free Schools, Fair Wages, Justice and Equal rights." It cost a nickel and carried classified ads for everything from pianos, sails, cotton scales and first communion wreaths to ointments that claimed to "relax"–straighten–the hair. *The Crusader*'s star contributor was Rodolphe Desdunes. The son of a Cuban mother and a Haitian father, Desdunes worked as a customs agent by day and, with smoking pen, scribbled polemical columns by night. Hundreds of his articles, still preserved in the archives of Xavier University in New Orleans, offer a window into the desperate fight to keep civil rights from slipping away.

"Colored people have largely patronized the railroads heretofore," Desdunes wrote on July 19, 1890. "They can withdraw the patronage from these corporations and travel only by necessity." He proposed a boycott not unlike the one launched in Montgomery, Alabama, 70 years later.

The 1890s were not a good time to exercise civil disobedience in the American South, or to get on the wrong side of a mob, whether you were black or not. The year 1892 alone produced 226 mob murders, mostly of

black men, the highest number in the recorded history of lynchings. In New Orleans, on March 14, 1891, a newspaper editor and a prominent attorney led a crowd of several thousand to Parish Prison. Angry over the acquittal of Italian immigrants accused of the killing of police chief David Hennessy, they broke in, hunted down a group of 11 Italians, shot them, then hanged some from streetlamps and shot them again. Mournfully reflecting on the mood in New Orleans, a black woman told a reporter: "Thank God it wasn't a nigger who killed the Chief."

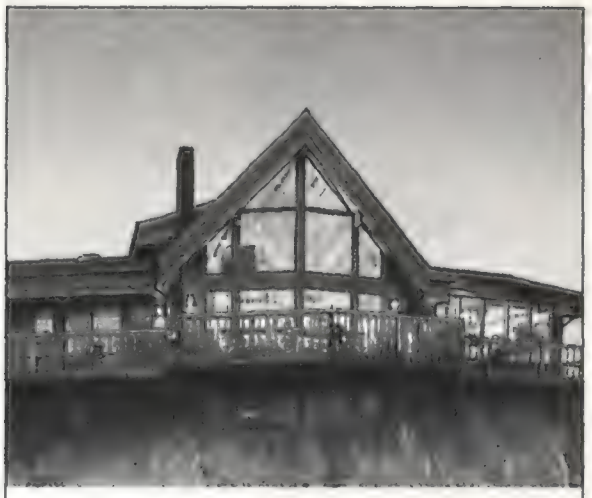
To combat what became known as the "Jim Crow car law," *The Crusader* and the Comité des Citoyens acquired a small but influential membership. It involved C. C. Antoine, a former officer in the Union Army, who had served four years (1873-77) as Louisiana's lieutenant governor, and wealthy philanthropist Aristide Mary, who had financed lawsuits against other resegregated establishments.

The Comité also included sail manufacturer Arthur Estèves, who became its president. To fight the Jim Crow car law, it was prepared to solicit funds not only from benevolent, social and religious societies in town but from former abolitionists in such faraway cities as Washington, D.C., Chicago and San Francisco. About $3,000 was quickly raised to launch two test cases: one to challenge legal segregation of trains on interstate routes and one to challenge segregation on conveyances within the state. The aim: to "seek redemption" from the Supreme Court of the United States. "We find this the only means left us," a Comité statement concluded. "We must have recourse to it, or sink into a state of helpless inferiority."

In 1896 Albion Tourgée argued for Plessy during Supreme Court appeal.

Northerner John Ferguson became judge just before he tried the Plessy case.

It was a forlorn hope, but not as forlorn as it would become in the slow process of going through the legal system. For one thing, on the face of it, if you gave any thought to the intent of the men who wrote the 14th Amendment, the Separate Car Act seemed a clear violation of the constitutional rights of the black citizens of Louisiana. But public opinion in the North had changed rapidly, and so, in the years after 1877, had the makeup of the Supreme Court, which lost its reasonable mix of justices sympathetic to the subject of civil rights.



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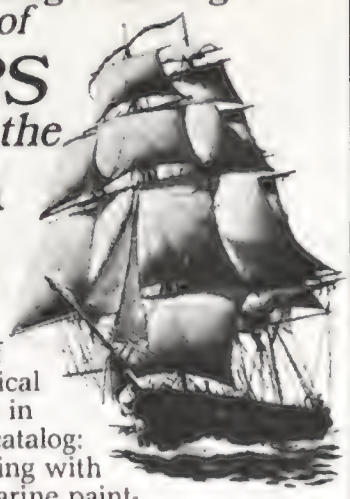

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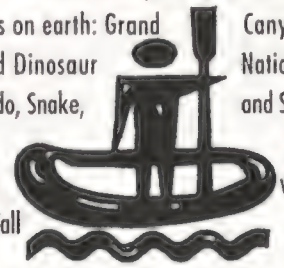

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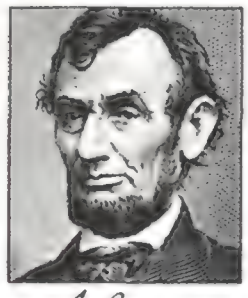

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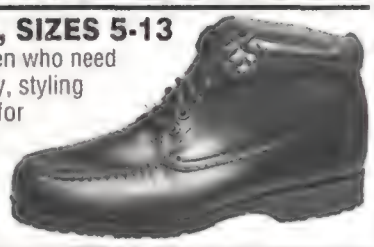

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Some railroad companies initially had been against the bill. It was going to cost money to build and run extra cars–for the bill implied that if a half-empty "white" car was waiting, and even if only one black passenger showed up, he or she would have to have a whole separate-but-equal vehicle made available. In a city that had for so long seen so much racial mixing, railway conductors would now have to decide who was white and who was black–a touchy business, especially since some wives and husbands would not be allowed to ride together.

One of the reasons that Homer Plessy was picked for the job was that he had fair skin. Had it been left to chance, he probably could have ridden the train in the "whites only" section unnoticed. But by prearrangement between the Comité and the East Louisiana Railroad, everything was ready for him when he came.

On June 7, 1892, Plessy strolled to the Press Street depot, which included a restaurant and a combination waiting room and ticket office (both still open to him), bought a first-class ticket and, ignoring the new "Colored Only" sign, sat down in the coach reserved for whites. It was to depart at 4:15 P.M., cross a bridge spanning Lake Pontchartrain and pass through

Only Justice John Marshall Harlan dissented from "separate but equal."

Abita Springs for a two-hour run to Covington.

Hardly had the train started moving when conductor J. J. Dowling approached Plessy. "Are you a colored man?" he asked. "Yes," answered Plessy. "Then you will have to retire to the colored car," said Dowling. Plessy stated that he had paid for his ticket and intended to ride to Covington. Dowling signaled the engineer to stop. A private detective, Captain Chris Cain, hired by the Comité, came aboard and warned Plessy: "If you are colored you should go into the car set apart for your race. The law is plain and must be obeyed."

When Plessy again refused, he was taken a half-mile down to Elysian Fields Avenue for booking at the Fifth Precinct Station. Members of the Comité met him, and a judge released him on temporary bail. The next day a story in a New Orleans daily described Plessy as a "snuff-colored descendant of Ham." After a hearing, Comité member Paul Bonseigneur plunked down a $500 bond (raised by putting his own house in hock) to guarantee Plessy's appearance for trial. Plessy was 30 years old. The future of constitutional rights for blacks in America would ride on his day in court.

Enter John Howard Ferguson, 54, the judge whose name would forever be linked to Plessy's in American history. The lawyer son of a shipowner on the island of Martha's Vineyard, Massachusetts, Ferguson had come South after hearing of opportunities there from returning Civil War soldiers. He was what Southerners called a carpetbagger–meaning anybody who came South after the fighting to administer the remade South or to look for profit in the South's adversity. He married the daughter of a prominent local attorney, a Louisiana Unionist noted for his condemnations of slavery, and began practicing law. Ferguson served in Governor Nicholls' 1876 Legislature. Eventually he campaigned for Murphy Foster, the man who replaced Nicholls as governor and engineered passage of the Separate Car Act. Ferguson was made a judge and assigned the Plessy case a month after Plessy's arrest.

But only a short time after becoming a judge, in another Comité-generated case, he ruled that the Separate Car Act was unconstitutional on trains that traveled through several states–because of the federal government's predominant interest in interstate commerce. The Comité celebrated the decision, and Louis Martinet chortled in print: "Jim Crow is dead as a doornail."

He was wrong. At Plessy's arraignment, Homer Adolph Plessy v. The State of Louisiana, one of Plessy's lawyers, James Walker, argued that neither the state nor any railroad conductor representing it had the right to deny Plessy's liberty on the basis of race, since Plessy was a citizen, and the 14th Amendment clearly said that "no state shall make or enforce any law which shall abridge the privileges or immunities of any citizen of the United

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States." Judge Ferguson did not agree. The state, he claimed, had a legal right to regulate railroad companies operating solely within the state. Plessy had not been deprived of his liberty. "He was simply deprived of the liberty of doing as he pleased, and of violating a penal statute with impunity."

A swift appeal was presented to the State Supreme Court, which instantly agreed with Ferguson's decision. The 14th Amendment guaranteed black individuals "equality" but did not guarantee "identity or community" with white society. The glum Comité now could look only northward to the Supreme Court of the United States in Washington. As time passed, Plessy's prospects grew worse.

In the decade leading up to 1896, when the case at last was argued before the Court, seven Justices had been replaced–mostly by men who shared the increasingly prevalent belief that Reconstruction had largely failed and that blacks must fend for themselves. The only holdovers from Reconstruction times were John Marshall Harlan of Kentucky, a Hayes appointee, and the aging Stephen J. Field, who had been appointed in 1863 by Lincoln.

Attorney Albion Tourgée, who eventually argued the case for the Comité, estimated that only one Justice would firmly lean to Plessy's side, three would be uncertain and five, frankly opposed. In a letter to Louis Martinet he added a foreboding postscript: "It is of the utmost importance that we should not have a decision *against* us as the court has *never* reversed itself on a constitutional question."

Tourgée was not the only one to notice the changing temper of the Supreme Court. In 1894 Louisiana again placed racial restrictions on marriage and prohibited citizens of opposite races from using the same railroad depot waiting rooms.

The Comité's chances dwindled as the climate of opinion changed, even among people of color. Voices in some quarters argued that resisting white supremacy always evoked harsher re-

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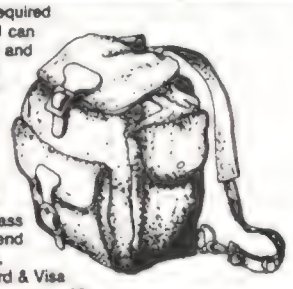

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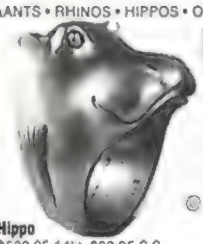

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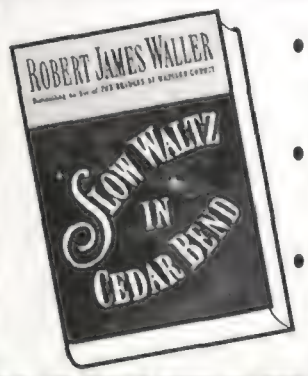

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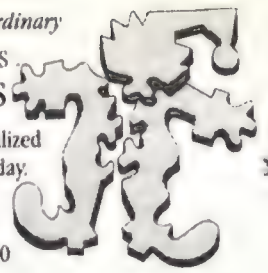

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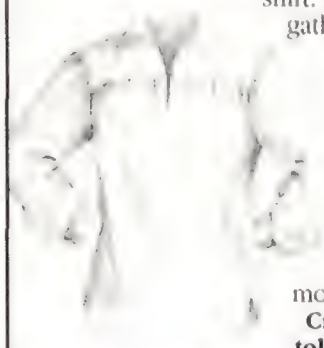

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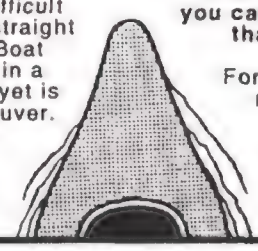

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Plessy died in 1925 and was buried along with his mother's family in the integrated St. Louis Cemetery No. 1. The inscriptions are in French.

sponses, and that the struggle for decent conditions was what mattered most, not integration. In 1895 Booker T. Washington, head of Tuskegee Institute, publicly called for accommodation with segregation. Washington argued that in the face of white hatred, integration simply stirred up opposition. The main thing was to concentrate on making segregated schools work, on learning trades and on getting ahead in life.

But the Comité had pledged to see the case to the end. By late fall 1895 everything was in place. Albion Tourgée, with lawyers S. F. Phillips and F. D. McKenny, had filed final papers for the October 1895 term in Homer A. Plessy v. J. H. Ferguson. Tourgée went before the Supreme Court in April 1896. State arguments were made by Louisiana's Attorney General M. J. Cunningham and lawyers Lionel Adams and Alexander Porter Morse.

On May 18 the Court issued a ruling. With only one dissent it granted states the right to forcibly segregate people of different races. Writing for the majority, Justice Henry Billings Brown, appointed by Benjamin Harrison, dismissed Plessy's 14th Amendment claims and, as precedent, pointed to the existence of separate schools in the District of Columbia and the long-standing bans on interracial marriage. The only test of such segregation, he said, would be whether or not the regulations were reasonable. The Court also stated that "legislation is powerless to eradicate racial instincts or to abolish distinctions based upon physical differences." As for determining who was black or white, that was left to the discretion of each state.

The lone dissenter was Justice John Marshall Harlan. "The destinies of the two races in this country," Harlan wrote, "are indissolubly linked together, and the interests of both require that the common government of all shall not permit the seeds of race hate to be planted under the sanction of law. . . . The thin disguise of 'equal' accommodations for passengers in rail-

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road coaches will not mislead anyone, nor atone for the wrong this day done."

The decision was remanded to the Supreme Court of Louisiana on September 28, 1896. The Comité issued a final statement: "In passing laws which discriminate between its citizens," it declared, "the State was wrong. . . . Notwithstanding this decision . . . we, as freemen, still believe that we were right, and our cause is sacred."

On January 11, 1897, Homer Plessy returned to court for sentencing. By then, times had changed dramatically. The Comité had disbanded; *The Crusader* had ceased publication. All over the South, white supremacists were firmly in control of the Legislatures. Judge Ferguson had stepped down in 1896, and Judge Joshua Baker was presiding. Plessy changed his plea to guilty, paid a $25 fine and walked out into the brave new world of a segregated Louisiana.

Those in the black community who thought racial separation would bring peace were in for a rude awakening. Emboldened by the Supreme Court's Plessy decision, in February 1898 Louisiana called a constitutional convention in New Orleans to lay down a blueprint for white supremacy. Endorsed by Governor Foster, the delegates made it illegal to run an integrated school, allocated state money as a "pension fund" for the relatives of Confederate soldiers, declared the Louisiana Democratic Party a "whites only" organization and used various devices, such as the "grandfather clause," to keep blacks and immigrants from voting. "Our mission was to establish the supremacy of the white race," the chairman of the judiciary committee bluntly declared. In the four years from 1896 to 1900, more than 120,000 black voters were removed from the rolls, their numbers dropping from 45 percent to 4 percent of eligible voters. By 1900 Louisiana did not have a single black representative in its Legislature. There would be none until 1967.

While legislation made things "sepa-

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rate," the "equal" treatment of the Supreme Court ruling seldom materialized. The greatest disaster would come in education. The South spent very little money on black schools. In New Orleans, the city school board did not open a public high school for blacks until 1917. Even then, black teachers were paid less than their white counterparts, and their pupils received secondhand books and supplies.

One by one the civil rights gains of Reconstruction vanished. So too did the principals in the Plessy v. Ferguson case. Judge Ferguson died in 1915 at age 77. In a front-page story, the *Times-Picayune* lauded him as one who "allied himself with the Democratic reform element" and "took part in the struggle for white supremacy." He was buried in the Lafayette Cemetery on Washington Avenue. In August 1925, some 50,000 white-robed members of the Ku Klux Klan marched in Washington, D.C.

Homer Plessy had died a few months earlier that year. His obituary in the *Times-Picayune* was simple: "PLESSY–on Sunday, March 1, 1925, at 5:10 A.M., Homer A. Plessy, 63 years, beloved husband of Louise Bordenave." On the front page of the same paper was the headline "Supreme Court Puts Approval On Segregation," referring to a Louisiana Supreme Court ruling that upheld a segregated housing ordinance in New Orleans. Plessy lies with his mother's family in St. Louis Cemetery No. 1, a 200-year-old integrated Catholic graveyard in the Tremé area. Fifteen years after his death there were only 886 registered black voters in the state of Louisiana.

Nearly 15 more years would pass before NAACP attorney Thurgood Marshall obtained a rehearing of Plessy's cause in another landmark case, Brown v. Board of Education. In that instance, the Court overturned the 1896 ruling and declared "separate but equal" to be unconstitutional. That time, Homer Plessy won.

The decision–that "separate but equal" did not violate 14th Amendment rights of black people–was reversed in 1954 after Thurgood Marshall (center) argued the now famous Brown v. Board of Education before the Supreme Court.

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Book reviews

Goodbye, Liberty Belle: A Son's Search for His Father's War
J. I. Merritt
Wright State University Press, $18.95

At the end of World War II, a spate of books about it washed across the display windows of our bookstores. A few were very good, for you can't shovel millions of young people into armed conflict without picking up a writer or two among them. But books about the air war, though eagerly read because aerial combat was still unusual and fascinating, tended toward a dreary monotony: diaries of days crammed with blazing guns, smoke-filled cockpits, exploding planes, blossoming parachutes, and no room for caring, for humanness.

Readers got the idea that pilots were technicians, able only to report on eight-G pullouts, compressibility, three-rad deflection shots and self-sealing fuel tanks. Obviously they were hopelessly unable to answer the question "What was it like?" And their knowledge of writing was apparently limited to scribbled acronyms in log books.

But now, Doubleyou Doubleyou Two–"the Big One"–is half a century old. Its veterans are mostly retired and sometimes given to contemplation. And we're getting fresh war memories, edited by perspective. These include, at last, many fine stories from old fliers.

Goodbye, Liberty Belle is one of a half-dozen or so recently released books that deal with our bombing of Hitler's Europe. The subject has escaped a penetrating look, perhaps because the cost to us of flying daily to targets guarded by solid walls of flak was staggering. Surviving bomber crews couldn't have felt much like writing about their "glory days" until memories dimmed of wings blown off, of screaming voices in earphones, of blood dribbling from bomb bay doors as ravaged planes made it back to base.

Liberty Belle, a B-24 bomber of the Army's Fifteenth Air Force, flown by Jim Merritt, does not make it back. Shot up four miles above Vienna, on an October day in 1944, she sags earthward as Merritt babies her past the German guns. Finally, over a part of Yugoslavia controlled by Tito's Partisans, the crew of ten, miraculously unhurt, bails out.

Now jump forward more than 40 years. Merritt's son, a professional writer only vaguely aware of his father's war experience, rounds up most of the old crew, at last eliciting a full-blown account of their 49-day odyssey to safe haven in Italy. The encounter inspired father and son to return to the Balkans in search of the people who rescued the crew, cared for them, and helped them elude the Nazi troops and escape. The book is the son's story of this revisit and involves a network of themes that usually occur in a novel: the nurture of old memories, the grasp of long-forgotten friendships, the dawning light of understanding between father and son.

The son watches Dad recall the crew's tough times traveling with the Partisans–constantly moving, almost always wet and hungry, yet treated like heroes by villagers. Finding some of the same villagers in 1986, the Americans get a huge dose of Balkan hospitality, much of which comes in endless toasts with the explosive plum brandy known as *rakija.* The son delights at the sight of Dad in a bear hug with one of his rescuers: "It was a moment that in my wildest imaginings I never thought to see–my conservative Republican father in the arms of a card-carrying Communist."

Another thing: though the 1986 visit reveals little political tension in Yugoslavia, it reminds the elder Merritt of the constant strife between Serbs and Croats back in 1944. Left-wing Serbs and some Croats tended to join Josip Broz Tito's Partisans; conservatives–including royalists–mainly Serbs, usually joined the Chetniks, commanded by Drazha Mihailovic. "Although Chetniks and Partisans looked on each other as the primary enemy, early in the war they occasionally joined forces to fight the occupying Germans," explains the author. Meanwhile, right-wing Croats often drifted into the Ustashi, a pro-Nazi group, but

disliked the Germans about as much as they hated the Serbs.

The seeds of today's strife were deeply rooted indeed, even 50 years ago. And those conflicts were holdovers of the Balkan Wars that predated World War I! In fact, the blood feuds are centuries old. What a task to destroy a foundation of hatred sunk so deep in the past.

Our wartime heroes reached a British mission to the Croatian Partisans near Glina. It was run by Winston Churchill's hard-drinking son, Randolph, with author Evelyn Waugh as second in command. The effete interplay between the two is amusing in retrospect but must have driven the Yanks nuts–so close they were by then to freedom.

Unhappily, Glina's airstrip was a muddy morass. The fliers waited for better weather, playing cards to pass the time. Finally they managed to move on to the port of Zadar. The next day, Thanksgiving, the *Liberty Belle*'s crew crossed the Adriatic on a British torpedo boat to Ancona. There, the men met with a standard military homecoming: "Following procedure, they were ordered immediately to the delousing shack, where they stripped off their clothes and an enlisted man pumping a bellows dusted them with Lysol powder. . . . Outfitted in fresh clothes, they boarded a C-47 transport for the short flight to Fifteenth Air Force headquarters in Bari."

And in 1986 Jim Merritt returned, and again barely made it out, battling his way through the overwhelming hospitality.

This grandly complex tale is handled expertly by Merritt the younger. *Goodbye, Liberty Belle* is a war story, sort of. But it has enough facets to gleam brightly whichever way you look at it.

Edwards Park wrote of his wartime experiences as a pilot in *Nanette.*

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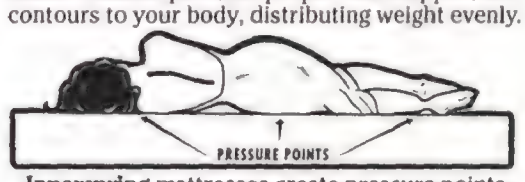

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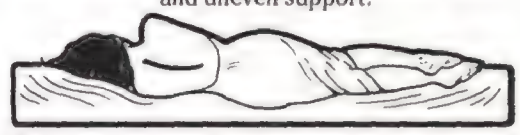

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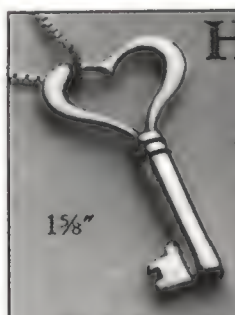

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By Donald Dale Jackson

Remember the first rule of selling: don't drop the money on the ground

When I was a kid I always had the slightly furtive feeling that I was somehow un-American. The business of America, of course, was business. Business meant selling. Selling meant asking people to buy things that they might not need. For me, that was a concept with zero appeal. I blush to recall that my stated reason for this rejection of the American Way bristled with moralistic, highfalutin pronouncements (I had grander hustles in mind), but the real reason was probably a forelock-tugging diffidence in one-on-one transactions.

I took an occasional stab at selling as I grew up, just enough to confirm my conviction that I had no gift for it. Once I was recruited to sell programs at a college football game. The man in charge gave me something like a hundred programs and ten dollars in change before the game. I remember the giddy satisfaction of shoving a bill into the pocket of my canvas apron with one hand while crisply snapping a program into a buyer's hand with the other.

The bills became a dusty wad of crumpled currency of all denominations. When it came time to turn the money in and collect my pay, I pulled out the wad, smoothed out the bills and presented them with considerable pride. The head man counted them, looked at me without admiration, then counted them again. "You're $30 short, sport," he said. I knew immediately what had happened: in the feverish scuffle of my debut as a capitalist, I had dropped bills on the ground and given people change for ten dollars when they'd given me five.

By the time I got to college I knew what I wanted to do for a living, and of course it was nothing so gauche as selling, but once in a while desperation drove me back to the marketplace. I spent four weeks one summer trying to sell Fuller brushes to farm wives in Wisconsin. I never did learn my spiel, and the women usually seemed to feel more sympathy for me than interest in my product–but not enough to buy. I think I racked up about $12.30 in sales. Each merchandising failure hardened my conviction that sales was not my game, along with my righteous belief that I was intended for something a little more–dare I say it?–creative. I was a writer, and for the next 30 years that's all I was.

Then something amazing happened. A friend told me that the complete collection of *Life* magazines I had in my basement was quite valuable, especially to collectors who covet certain issues, celebrity covers, ads and the like. I looked into it, and before long I was a mail-order dealer in *Life* back issues and ads. One man wanted every issue from 1937 to 1946 so he could read the history of the decade prior to his birth. A man named Smith collected covers featuring people named Smith. Ad collectors specialized in come-ons for Coke, railroads, Lydia Pinkham's vegetable compound and a dozen other subjects.

I found I enjoyed all this immensely. Now when my supply of the old *Life* runs low, I prowl for more magazines wherever I can find them, and it is astonishing how happy it can make me to find a bunch–cheap. Is it possible that I was a closet salesman all along, a hustler just waiting for the right hustle?

What surprised me most was the feeling of well-being it gave me to *make a sale,* to connect something I had worked up–found, catalogued, advertised–with somebody who wanted it. At last I was savoring the delights of capitalism. Why is that such a kick? How long has this been going on?

I branched out. I learned through collector publications that there were customers for Olympic memorabilia, military patches, tennis-tournament programs and other things I happened to have on hand. I sold them, and sometimes bought them to sell. My wife noticed me eyeing her accordion music–salable, I knew–and locked it away. I was turning into some kind of demon entrepreneur. I was the person I had warned myself about.

Not that it was all fun and games. I realized that my sales skill did not always match my fervor when I discovered myself paying $3 for magazines I had sold earlier for $2.50. After one $5 sale I calculated that my expenses–for the magazine, mailing, et cetera–came to $4.85. I could've been back outside the football stadium. This couldn't be what made America great.

My father is a lawyer, but he has always believed in selling. His message to me as a kid was that we all have to sell ourselves–our personality, reliability, skills, et cetera; he had to do it as a lawyer, and I did as a writer. There were a lot of years when I had doubts about that proposition, and I think he sometimes despaired of my ever grasping it.

I saw him not long ago in my new incarnation as a merchant of history and nostalgia. He said he had some old sheet music and watches, and I was welcome to sell them for half the profits. I knew through my experience with *Life* that if I could find a flea market I could find buyers for music and watches, and I sold them a few days later. I didn't lose the money, either; I don't use those canvas aprons anymore.

Later I overheard my dad talking to someone without realizing I was in the next room. I heard the smile in his voice as he said, "Boy, that Don, he can sell *anything.*" I can't remember that being said of me before, by anyone. It didn't sound half bad.

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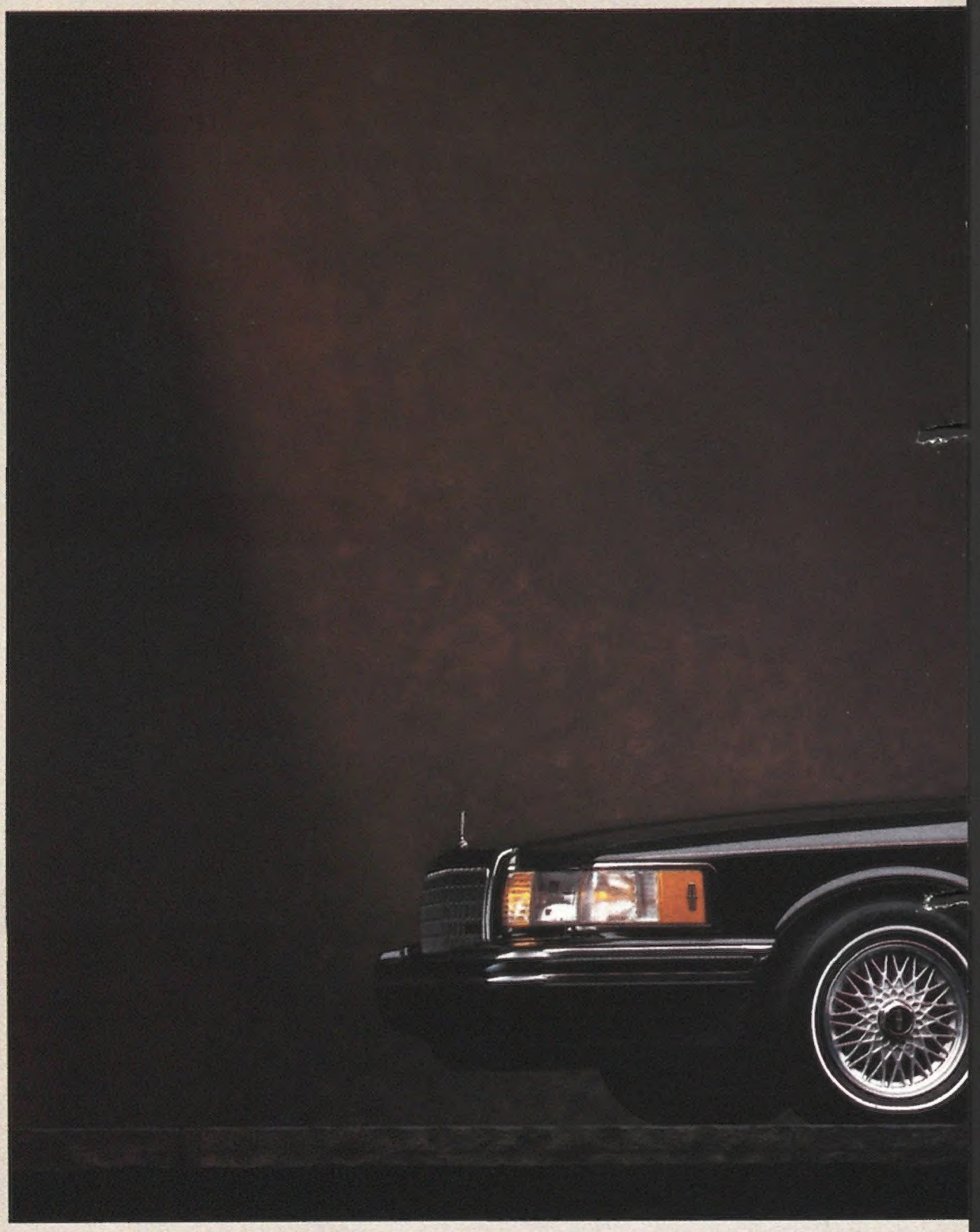

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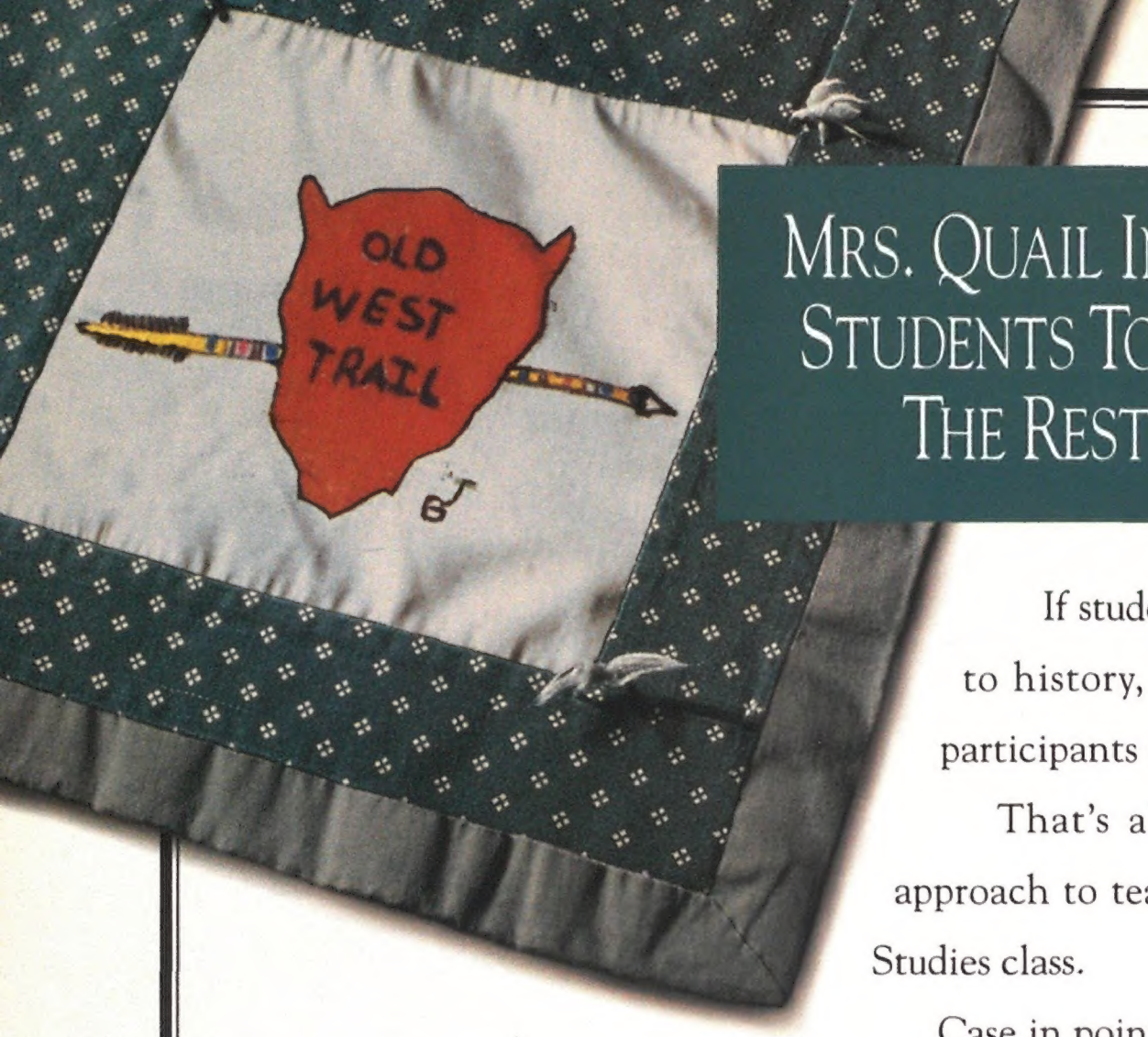

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